

# **INDEX**

<b>Topic</b>	<b>Page No</b>
1. About TCS	1-22
2. Productive Reach	23-46
3. Quantities Aptitude	47-372
4. Technical Interview	373-447
5. Human Resource Management	448-470
6. Students Feedback	471-474

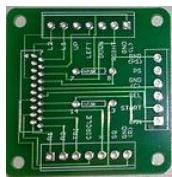
# **About**

# **TATA CONSULTANCY SERVICES**



# Quantitative Aptitude

(Productive Reach  
Placement Cell  
&  
Students data)



## Technical Interview

(Previous Question papers  
Placement Cell  
&  
Student's data)



# **Human Resource Management**

(Previous Question papers  
Placement Cell  
&  
Students data)

**Productive Reach**

**Question  
&  
Answers**

# **Placement Cell Data**

# **Student's data**

# **Previous Question papers**

# **Placement Cell Data**

# **Student's collection**

# Previous Question papers

# Placement Cell Data

# Student's data collection

## About TCS:

Tata Consultancy Services started in 1968. Mr.F.C Kohli who is presently the Deputy chairman was entrusted with the job of steering TCS. The early days marked TCS responsibility in managing the punch card operations of Tisco. The company, which was into management consultancy from day one, soon felt the need to provide solutions to its clients as well.TCS was the first Indian company to make forays into the US market with clients ranging from IBM,American Express, Sega etc. TCS is presently the top software services firm in Asia.

During the Y2K buildup, TCS had setup a Y2K factory in Chennai as a short-term strategy. Now, with E-business being the buzzword, the factory is developing solutions for the dotcom industries. Today, about 90 percent of TCS' revenue comes from consulting, while the rest from products. TCS has great training facilities. In addition to training around 5 percent of the revenue is spent upon its R&D centers like the Tata Research Design and Development Centre at Pune, along with a host of other centers at Mumbai and Hyderabad.

It benchmarked its quality standing, invested heavily in software engineering practices and built intellectual property-in terms of patents, code and branded products. At the same time, it expanded its relationships with technology partners and organizations, increased linkages with academic institutions and incubated technologies and ideas of people within TCS and outside. TCS has already patented 12 E-Commerce solution product packages and has filed six more applications for patent licenses.

Over \$25 million were spent on enhancing hardware and software infrastructure. The company now has 72 offices worldwide. As many as seven centers were assessed at SEI CMM Level 5 last year(3.4 mistakes in a million opportunities). These include Chennai, Mumbai, Bangalore, Calcutta, Hyderabad and Lucknow. Several business and R&D relationship with global firms like IBM, General Electric, Unographics Solutions have been made.

The present CEO of the company is Mr. S. Ramadorai. The companies strength is about 14,000.

For more information about this company visit their website at [www.tcs.com](http://www.tcs.com)

At TCS we believe in offering much more than just a job; we strive to give you a full-fledged career. Towards this end we provide you with superior training and the opportunity to work in different industry and service practices on the latest technology platforms.

Developing software for our clients - among whom we count seven Fortune 10 companies - is a fast-paced, challenging and result-oriented endeavour, and we do this in an enjoyable work environment. What TCS offers you is an accelerated career path that you can yourself design as you go along. We also offer a host of other tangible and intangible benefits that will transform you into a world class infotech professional.

## **What's in it for me?**

Exposure to business excellence and evolving technologies  
Careers across business and technology areas  
Being at the forefront of the e-revolution  
Global exposure - with projects in over 50 countries and 800 clients, many of them Fortune 500 standouts  
World class training, and the opportunity to learn continuously  
An open-door, energetic environment with world-class infrastructure

## **TCS culture**

At TCS we have an energetic and open workplace environment, and a collaborative culture that's based on teamwork. Pulling together is a central tenet of our work ethic.

Energetic and full of enthusiasm, we enjoy our day (and night) at work. Life at TCS is a stimulating and exciting experience. Not only do our offices have the best infrastructure and technology, our colleagues have a knack of working hard — and partying harder.

If you'd like to spend your career in an extremely vibrant, stimulating and fun place, TCS is where you have to be.

We take pride in adhering to the Tata 'code of conduct', which is in place across the entire **Tata Group**. The code is a means of upholding and strengthening the trust reposed on us by our various stakeholders, be it our customers or the wider society.

## **Diversity at work**

TCS is an equal-opportunity employer and TCSers come from many nationalities and speak many languages. And, since we believe in celebrating everything under the sun, you will find us singing carols at Christmas and doing the dandiya dance at Navrathri with equal enthusiasm.

We are also habituated to do the regular outing, be it with our project teams, with Maitree or with just a bunch of other like-minded TCSers. We are off to treks, nature camps, picnics or just bus rides whenever we get the chance.

## **The doors are always open at TCS**

Our senior colleagues follow an open-door policy in which any associate can approach the CEO and senior management with work-related problems.

Communication is a big word at TCS and you will be regularly taking part in webcasts and chat sessions through which important corporate issues or decisions on real-time basis are shared with associates worldwide.

We also have institutionalised open-house sessions and engagement programmes in which associates at all levels meet and discuss various work issues. In addition, TCSers can also take part in one-on-one sessions where they can interact privately with senior management. These sessions are helpful in providing mentorship, as well as understanding real-life issues that colleagues face at work. The queries and discussions are formally recorded and followed up.

### **The better half of TCS**

Maitree, a fraternity comprising TCSers' spouses, was formed with the objective of bringing the large and geographically widespread TCS community under a common umbrella.

Maitree has two distinct objectives. Primarily, it serves as an information-sharing body where useful tidbits about living in a foreign country Which are the good schools in Minneapolis? Where do you get Indian spices in Stockholm? are shared by TCS employees and their families.

Maitree also functions as a forum where a wide range of socially relevant activities are conducted, be it improving the environment or taking care of the less privileged.

### **Training and Education**

**At TCS we see the training and education of our people as a continuous value-adding process. This approach hones, improves and enhances their skills — and makes the organisation stronger.**

TCS invests about 4 per cent of its annual revenues in training, a shining example of which can be seen at the state-of-the-art training centre in Thiruvananthapuram in the south Indian state of Kerala. Our training modules have been developed to serve the specific needs of individual employees, and are based on their needs at various stages of development in the organisation.

Consider our 'induction training program' (ITP), which is for all our recruits from engineering colleges. This is a specially designed, 77-day training course at the Thiruvananthapuram facility. The ITP is conducted with the objective of transforming engineers from diverse disciplines into software professionals.

Then there are the 'continuing education programs' (CEPs), which cover over 300 topics and can be delivered over a variety of channels: classrooms, computers, audio / video, contact sessions, seminars, conferences and workshops.

Our dedicated training centre in Thiruvananthapuram, established in 1998, sprawls over 58,000 square feet. The centre has 18 classrooms, a library, an auditorium, a conference hall, discussion rooms, and faculty and administrative areas. The facility has about 300 personal computers connected to servers.

TCS has 10 other centers in India fully equipped to conduct any type of training programme.

Get An Idea about TCS Campus Interview

**Selection Procedure contains 5 rounds:**

**1. Screening**

Screening criteria is:

- 65% in qualifying degree
- 60% in other classes

**2. Aptitude test + Psychometric test**

If you satisfy the above criteria, you'll be allowed to appear for the online aptitude test.

**Aptitude test**

Aptitude test contains three sections:

**• Verbal English 32 Q. 20 minutes.**

In verbal, Questions are similar but less exhaustive than GRE verbal section.

10 synonyms, 10 antonyms, 5 sentence completion (with multiple blanks), 7 reading comprehension

**• Quantitative 50 Q. 40 minutes.**

Quantitative consists of class X level mathematical skill testing problems.

**• Critical Reasoning 3 Para, 4Q. each 30 minutes.**

The test will conducted using a oracle based n/w software Qubex. It contains many thousand questions, so old papers won't help much. However, it is not true for Quantitative section. It will begin with a sample test of 5 minutes. duration. Each Question has 5 options, 1 is correct, No negative marking (i.e., no penalty for guessing). Each section will appear one by one & will end automatically when time finishes. Even if you save time on some section you can't use it in some other section. Time limit for each section is exclusive. Also, you can't revert back to any section once you leave it. The software can be set to some cut-off score level. If you score above cut-off, you'll immediately see Psychometric test on your screen.

**Psychometric test**

It contains **150 Q.** to be answered in **30 minutes.**

Each question has **3** options: Yes, No, Can't say.

Questions are essentially the same as you'll find in any old paper.

### 3. HR Interview + Technical Interview

The test is followed by a Technical and a HR interview. The technical interview is highly specialised and covers almost all subjects you have done in your curriculum. However one is required to name his/her favorite subject on which most of the interview is focussed. For Computer Engineers C, Operating Systems, DBMS, Microprocessors are mostly focussed upon. Electronics Engineers can be grilled on DCLD, Microprocessors and Communications. For details on the frequently asked questions please refer to our Interview section.

The HR interview which follows the technical interview is very general. The Hr interview is also important. Mostly questions are asked to test your temperament. You maybe asked your opinion on a variety of current affair topics. We were asked about Homosexuality, Lesbianism(the movie FIRE), Kashmir, Genome Project etc. In some cases questions regarding the company are asked. For details on the other frequently asked questions please refer to our Interview section.

### 4. Management Interview

### 5. Medical Examination

Each round is eliminatory, even Psychometric if you are really worth nothing.

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### **Go for a mock exercise before the real talk at the job table**

Hone your interview etiquette.....Churn the right mix of deportment, attitude and dressingskills for a great job talk !

Never make the big mistake of treating an interview lightly. It's not an impromptu thing where you depend on your improvisation skills. An interview requires careful thought and planning

before you take it. Keeping in mind some basic attitudes and presentation techniques will help you sail through it with panache.

So if you thought that going for an interview just meant pulling your best suit out of the wardrobe and updating your resume, please think again. You are forgetting the other essentials: body language, basic etiquette and attitude.

Remember that you are actually selling an entire package and the packaging, in this case, is as relevant as the product inside. Ultimately you are presenting yourself as a valuable professional to a new job environment. And you can't do that without minding the basic interview etiquette to get you ahead of the rest of the pack.

An interview is the sum total of many parts. It's not just what you say but how you say it that matters equally. So it's good to brush up on more than just your training skills when you do go in for an interview.

## **ATTIRE**

How you dress for an interview is perhaps as relevant as the way you lay out your resume. Says Nina Kochar of Upgrade Management Services, an organisation which coaches' executives in the basic rules of corporate etiquette: "A person who is sloppy in appearance shows a sloppy personality, so you have to be decently dressed." Of course, decently dressed does not necessarily mean being dressed to the gills. In most cases, this would mean you would wear long sleeved shirts and a pair of formal trousers. In fact, Nina Kochar does not recommend suits, especially for younger people. "A lot of young people do not have the money to invest in suits, consequently, they wear ill-fitting or borrowed suits and that looks even worse. A tie, shirt and pant should do the trick for most junior level positions."

Most HR experts would also tell you to mind the accessories like ties, belts and shoes. To be sure, badly matched shoes and ties can have a jarring effect on an interviewer. Similarly, please avoid heavy jewellery or personal accessories as they would look incongruous on you.

## **ENTRANCE AND INTRODUCTION**

Even though most of us are primed for the basic grilling that we would face during the interview, we seldom pay attention to the way we enter an interview room or how we introduce ourselves. Says Subhashish Mitra, deputy manager, Essar Cellphones: "A lot of people do not think it important to knock properly while entering the interview room. They assume that as an interview is taking place, the panel will be expecting them. To my mind this is a very major faux pas which really jars."

In fact, the best way to enter an interview is to knock, ask for permission to enter and then wait for a while before you actually sit down. Few interviewees know this but the interview panel needs a little quiet time to discuss the previous candidate before they get around to the next one. So your silence till you actually get seated would be very valuable. Try and keep a bag with you for all your papers and certificates; make sure this bag is an unobtrusive as possible.

## **ATTITUDE AND RESPONSE**

This is a grey area for most interview candidates. While dressing up and resume writing are skills you can Go for a mock exercise before the real talk at the job table handle with a little practice, cultivating the right attitude as an interviewee requires a lot of patience and reading between the lines. The usual complaint of most interviewers is that few interviewees are able to stri perhaps the best thing you can do for getting your answer right. Most interviewers like to give a lead to the candidate in the way they ask the question, so it's entirely up to you to note facial expressions and the tone of the words.

Do you show your certificates immediately to the interview panel?

Not till you are asked actually. You might already have sent in your resume, so you shouldn't try and offload all your achievements and skills onto the panel till a turn in the interview leads to such a situation.

Try and take cues form the tonal variations, facial expressions and thrust of questions from the interview panel. That in itself will give you a clue as to where this interview is heading.

## **TEN THINGS THAT AN INTERVIEWER LOOKS IN YOU!**

1. Family Background

2. Education

3. Experience

4. Stability

5. Initiative

6. General Ability

7. Interpersonal Skills

8. Confidence

9. Aptitude

10. Pleasant Looks

How one wished that an interview were a simple meeting of minds and hearts. Just one casual meeting where an employee's future gets sealed. Unfortunately, it's not something as pre-ordained as you would like it to be; it's a pre-meditated exercise which fetches you dividends only if your homework is done right.

## **Go Through The Process**

There are many different types of interviews designed to serve different purposes or situations. Regardless of the type of interview, most will incorporate the following stages: establishing rapport, exchanging information, and closing the interview. Pay attention to the job titles of the interviewer(s). This can help you decide how much technical detail to provide in your responses.

### **Establishing Rapport**

This is a very important part of the interview because while establishing rapport, first impressions are made, and the tone of the interview is set. Some people suggest that the decision to hire is greatly influenced by the first five minutes of the interview. A good interviewer will introduce him/herself, and take the lead. Follow his or her lead - if they are chatty, be chatty; if they are formal, be formal. Some employers use what seems to be casual conversation to get to know you on a more personal level – this may be crucial to a hiring decision!

#### **Tips:**

- Smile and maintain eye contact. This is one way of communicating confidence, even if you don't feel it.
- If the interviewer offers his or her hand, shake it firmly. If they don't, it is appropriate to offer yours.
- Wait until the interviewer sits or offers you a seat before sitting down.
- If the interviewer is making small talk, participate. Keep your answers short and positive.

### **Exchange of Information**

This is the bulk of the interview. It is your opportunity to let the interviewer know what you have to offer, and your chance to learn more about the organization.

#### **Tips:**

- When you answer a question, look the interviewer in the eye.
- Be aware of the interviewer's reactions. If he or she looks confused, ask if you can clarify anything.
- Be aware of what your body is saying. Avoid closed postures. Sit upright, but not stiffly.
- Try to find a comfortable position as that will make you feel more relaxed.
- Control your nervous habits. Don't swing your foot, talk with your hands (to an extreme), or fiddle with jewelers, buttons, pens, etc.
- Show that you are interested in the job by asking questions.
- Try not to appear bored or anxious. Don't look at your watch.

### **Closing the Interview**

When the interviewer is done gathering the information that is needed, he or she will ask if you have anything to add, or if you have any questions. This is your opportunity to mentally review your inventory of skills and make sure that you have communicated everything that you wanted to. If any of your questions have not been addressed during the course of the interview, now is the time to ask them.

### Tips:

- Thank the interviewer for his/her time and consideration.
- Ask when you can expect to hear from him/her.
- If it is not known when a decision will be reached, ask if you can phone in a week's time to inquire about the progress.
- If the interviewer offers his/her hand, shake it firmly. Otherwise, it is fine to offer yours first.
- If not already discussed, you can offer to leave a sample of your work, or portfolio if you have one.

#### • **PREPARATIONS**

- Let's say you are going for an interview tomorrow. You have prepared yourself well for the occasion - anticipating the questions and getting ready the answers - but have you given a thought to what you will wear?
- If you have not peeked into your wardrobe yet, it's time to take a real hard look now. Your application's fate depends not just on how well you answer the interview questions, but also on how well you project yourself physically. The first impression your interviewer makes about you is based on the way you look, and you know what they say about first impressions. According to Joe Hodowanes, J.M. Wanes and Associates career strategy advisor, "The way a person dresses is the single biggest non-verbal communication you make about yourself." The right dressing is a measure of the seriousness that you place on the position, as a person normally spends time on his looks if he considers an event important enough.
- "Although proper dressing by itself will not get you the job, a poor dress sense may exclude you from further consideration," warns Gerry Ditching, managing partner of Filgifts.com. Besides, given two equally good applicants, the company may choose to hire the person who is dressed more professionally. Here are some tips to give you a headstart.

#### • **MEN**

- Long-sleeved shirt and dark slacks. White is still the safest and the best color for shirts. The colour is also appropriate for our tropical weather. Also acceptable: pale shades such as beige, blue, and other pastels.
- Tuck in the shirt and do not roll up the sleeves. Never wear a short-sleeved shirt to an interview or any business purpose. Wearing a short-sleeved shirt will destroy your executive image.
- Ties. Optional. But if you do wear one, choose a conservative pattern. Solids, small polka dots, diagonal stripes, small repeating shapes, subtle plaids and paisleys are all acceptable.
- Belts. Belts should match your shoes. Those with smaller buckles with squared lines look more professional.

- Socks. Black socks are the best, followed by blue or gray, depending on your attire. Never wear white socks! Check your sock length, too--no skin should show when you sit down or cross your legs. Shoes. Black or burgundy leather shoes with laces on them, because tassel loafers are very casual. Other suitable colors are brown, cordovan and navy.
- Hair. Keep neat, short and preferably parted on the side. And shave off all those facial hair.
- Jewellery. Wear no or little jewellery. The watch and wedding ring are the only acceptable pieces of jewellery to go with the male attire. Thin gold or leather-strapped watches look professional but not digital watches. Also, avoid political or religious insignias, necklaces or bracelets. Definitely no pierced body parts, and cover up your tattoos!
- Accessories. As much as possible, use leather briefcases or folders to hold copies of your resume. Use narrow briefcases and avoid plastic folders and plastic ball pens as they are out of place.
- **WOMEN**
- Three-piece business suits, blouse and skirt or slacks, and cardigan twin-sets. Sleeveless shirts should be rejected. Short-sleeved blouses are okay when they are tailor-cut or have features such as a sports collar or double breast design to create a business-like look. Skirts can either be long provided it does not create a Cinderella or barn-dance look or short where it falls no shorter than two inches from the knee. Nothing too revealing, please!
- Panty-hose or stockings. A must for professional grooming, but nothing with overly fussy patterns. Bring an extra pair, just in case the ones you are wearing run.
- Shoes. Closed shoes or pumps with at least 1½-inch heels suggest a more professional look. Dark colors are best.
- Hair. Hair longer than shoulder length should be worn up or pulled back. Don't let it fall in front of your face and don't keep trying to fix it during the interview. Avoid large hair ornaments and trendy hairstyles.
- Make-up. Be subtle; natural is the key word. Light shades of lip coloring and nail polish are recommended.
- Jewellery. Be conservative. Studs of gold, silver or pearls are best. Do away with gaudy fashion jewelers, and those that clank and make noise when one moves.
- Accessories. Folders and bags should blend well with the total professional look. Women should match their purse with their shoe colour.

## The Interview

Interview is an opportunity for both the employer and the applicant to gather information. The employer wants to know if you, the applicant, have the skills, knowledge, self-confidence, and motivation necessary for the job. At this point you can be confident that the employer saw something of interest in your resume. He or she also wants to determine whether or not you will fit in with the organization's current employees and philosophy. Similarly, you will want to evaluate the position and the organization, and determine if they will fit into your career plans. The interview is a two-way exchange of information. It is an opportunity for both parties to

market themselves. The employer is selling the organization to you, and you are marketing your skills, knowledge, and personality to the employer.

## **Interview Preparation**

Research is a critical part of preparing for an interview. If you haven't done your homework, it is going to be obvious. Spend time researching and thinking about yourself, the occupation, the organization, and questions you might ask at the end of the interview.

### **Step 1: Know Yourself**

The first step in preparing for an interview is to do a thorough self-assessment so that you will know what you have to offer an employer. It is very important to develop a complete inventory of skills, experience, and personal attributes that you can use to market yourself to employers at any time during the interview process. In developing this inventory, it is easiest to start with experience. Once you have a detailed list of activities that you have done (past jobs, extra-curricular involvements, volunteer work, school projects, etc.), it is fairly easy to identify your skills.

Simply go through the list, and for each item ask yourself "What could I have learned by doing this?" "What skills did I develop?" "What issues/circumstances have I learned to deal with?" Keep in mind that skills fall into two categories - technical and generic. Technical skills are the skills required to do a specific job. For a laboratory assistant, technical skills might include knowledge of sterilization procedures, slide preparation, and scientific report writing. For an outreach worker, technical skills might include counselling skills, case management skills, or program design and evaluation skills

Generic skills are those which are transferable to many work settings. Following is a list of the ten most marketable skills. You will notice that they are all generic.

- Analytical/Problem Solving
- Flexibility/Versatility
- Interpersonal
- Oral/Written Communication
- Organization/Planning
- Time Management
- Motivation
- Leadership
- Self-Starter/Initiative
- Team Player

Often when people think of skills, they tend to think of those they have developed in the workplace. However, skills are developed in a variety of settings. If you have ever researched and written a paper for a course, you probably have written communication skills. Team sports or group projects are a good way to develop the skills required of a team player and leader. Don't overlook any abilities you may have

When doing the research on yourself, identifying your experience and skills is important, but it is not all that you need to know. Consider the answers to other questions such as:

- How have I demonstrated the skills required in this position?
- What are my strong points and weak points?
- What are my short term and long term goals?
- What can I offer this particular employer?
- What kind of environment do I like? (i.e. How do I like to be supervised? Do I like a fast pace?)
- What do I like doing?
- Apart from my skills and experience, what can I bring to this job?

## **Step 2: Know the Occupation**

The second step in preparing for an interview is to research the occupation. This is necessary because in order to present a convincing argument that you have the experience and skills required for that occupation, you must first know what those requirements and duties are. With this information uncovered, you can then match the skills you have (using the complete skills/experience inventory you have just prepared) with the skills you know people in that occupational field need. The resulting "shortlist" will be the one that you need to emphasize during the interview.

It is also in your best interest to identify the approximate starting salary for that position, or those similar. There are several ways to find out about an occupation:

- Acquire a copy of the job description from the employer (Human Resources/Personnel) or check with Student Employment Services. If you are responding to an advertisement, this may also supply some details.

The Career Resource Centre has general information files on a variety of occupations. Make sure you have read through the appropriate file and are updated on the occupation. If you belong to a professional association related to the occupation, use its resources. These associations often publish informative newsletters and sponsor seminars. It is also a good way to meet people working in the field. Conduct information interviews with people working in the field. Read articles about people in the occupation, and articles written by people in the occupation. Sources include newspapers, magazines and the internet. Find out what the future trends are in the area. Is technology changing the job?

## **Step 3: Know the Organization**

The more you know about an organization, the better prepared you will be to discuss how you can meet its needs. Some of the characteristics that you should know about an organization are:

- Where is it located?
- How big is it?
- What are its products and who does it serve?

- How is the organization structured?
- What is its history?
- Have there been any recent changes, new developments?

There are a number of ways in which you can access this information. Most medium- to large-sized organizations publish information about themselves. You can access this a number of ways:

- On campus at the Student Employment Services (company literature and business directories) or at the Drake Centre Library
- The Winnipeg Centennial Library has a business microfiche with information on over 5000 Canadian companies and business directories
- Many companies have internet home pages which you can locate by searching by industry and company name
- Finally, you can visit or phone the organization and request some information on their products, services or areas of research

If the organization is fairly small, or fairly new, there may not be much information published. In this case, it will be necessary to do an information interview. Contact someone within the organization, introduce yourself, explain that you are considering moving into the field, and ask if it would be possible to meet with him/her to inquire about the company/organization and about what exactly the position would involve.

#### **Step 4: Prepare Questions**

Having completed your background research, you are now ready to prepare questions to ask the interviewer(s). Try to think of questions for which the answer was not readily available in company

literature. Intelligent well thought-out questions will demonstrate your genuine interest in the position. Be

careful how many questions you ask, however, as too many can imply you feel the interview was not

successfully run. Pick your questions with care - this is your chance to gather information, so ask about

what you really want to know. Avoid sounding critical by mentioning negative information you may have

discovered. This is one of the most effective ways to compare different employers, so for issues of

particular importance to you (for example, whether they support staff upgrading), you should ask the same

questions of each employer. Some sample questions are:

- What are the most significant factors affecting your business today? How have changes in technology most affected your business today?
- How has your business/industry been affected by the recession?
- How has your company grown or changed in the last couple of years?
- What future direction do you see the company taking?
- Where is the greatest demand for your services or product?
- Where is most of the pressure from increased business felt in this company?
- Which department feels it the most?
- How do you differ from your competitors?
- How much responsibility will I be given in this position?
- What do you like about working with this organization?
- Can you tell me more about the training program?
- Have any new product lines been introduced recently?
- How much travel is normally expected?
- What criteria will be used to evaluate my performance?
- Will I work independently or as part of a team?
- How did you advance to your position?
- What are the career paths available in this organization?
- When can I expect to hear from you regarding this position?

It is very important to ask the last question because employers want to hire individuals who are interested in the position - and asking this question definitely helps to demonstrate interest on your part. Exercise judgement when asking questions to an employer. When being interviewed by a large company that has a high profile, one would not ask the question

"What is the history of your company and how was your company started?" You can find the answer to this question in the company's annual report or articles in magazines/newspapers. However, small- and medium-sized companies do not always produce publicly available annual reports and it may be difficult to access information on the company and its role in the industry. This question is appropriate if you have exercised all other ways to find out the answer.

- **The Basic Things**
- In addition to doing research and practicing your answers to common interview questions, you should be aware of general interview etiquette. Remember the following points when preparing for an interview:
- **Review your resume**, and make sure that you can explain everything on it. Arrive at the interview ten minutes early to give yourself an opportunity to collect your thoughts and relax. Be aware that many employers will have their receptionists record the time you came in. If you rush in at the last minute, an employer may have serious concerns about your ability to arrive on time for a normal day at work.

- Get a good night's sleep before your interview. You will think more effectively in the interview if you are rested. Also, yawning will not impress anyone. Eat something before the interview. If you are worried about your stomach growling, you will not be able to concentrate on the questions.
- Dress appropriately for the position that you are applying to. Try to dress like the people who work there would dress if they were representing their organization at some function. If you are unsure about what to wear, always err on the side of being too dressed up.
- Make sure that you are clean, neat, and well-groomed. Interviewers do notice your appearance, and first impressions are critical in an interview situation.
- Take a copy of your resume, transcript, references and perhaps a portfolio or work samples with you. Also take a pen and paper, as you may want to record some important information.
  
- Firstly, TCS has several levels of tests/interview in their selection procedure.
  1. Aptitude test (generally online test) consisting of three sections, verbal abilities, quantitative abilities and logical reasoning abilities.

TCS Latest Fresher Engineer Placement Sample Question Paper 5

Inverbal, u r asked antonyms of several words in english language, similar but less exhaustive than GRE verbal section. Quantitive consists of class X level mathematical skill testing problems. loogical reasoning will ask you yes/no/can't say type qstns based on a paragraph. u will have to read through the paragraph fast but efficiently understanding only the main pith of the written material.

regarding the words, they ask the same words over and over again. So, memorise the word meanings from all the papers that i have put up. U will surely get all of them common. In case, u have given GRE, don't bother abt this section at all. All words are common. Each section is time limited. I have forgotten the exact time division. So u can not afford to waste too much time on any one section.

2. Psychometry: When u clear the above three section, u will be allowed to appear for psychometry. Its 150 qstns to be answered in 30 min. Always remember to give POSITIVE and CONSISTENT answers since the same qstn repeats with a different sentence construction sometimes later. Try to hide -ve traits in ur character as like being impatient, getting bored easily, distracted easily, feeling uneasy in a gathering of many people, unsocial and over talkative nature, etc. They ask qstns like whether u wld make friendship with a person of opposite sex, feel insomnia without reason, consistently brood over a mistake u did in the past, the type of person u r, etc etc. what u r actually is not important, what qualities wld make ur

employers happy is important.

3. After u clear psycho, is ur technical interview. Qstns come mainly from the projects, experiences u have gathered. They check ur resume and the blue form and ask qstns from there. Even sometimes they test ur logical ablities by asking **puzzles** like the type they ask at Infy. get through with the project works and stuff and be smart and reply confidently.

4. Clearing technical inter will make u eligible for HR interview which is also the final stage. Qstns are various types, including ur background, ur hobbies, etcx etc. They are known to harrass people with their hobbies. so, whatever hobbies u write, plzz be through with it and prepare so that u can answer qstns from ur hobbies. Like if u say singing, plzz get through with ur scale and technical things related to singing etc. If u like reading, plzz be prepared to name a few novels and face qstns on those novels. Also, they might try to embarrass u by asking qstns of personal and slightly indecent nature like abt ur boyfriend, ur affairs(if any) etc. Stay calm and answer them with a smiling face. Keep eye contact. Don't get provoked by any means.

Thats abt all. They take a week or so to announce results. So have patience and hope for the best.

- **Think about the following points. Do any of them apply to you?**
- **Oversell**
  - Trying too hard to impress; bragging; acting aggressively.
- **Undersell**
  - Failing to emphasize the fact that you have related skills; discussing experience using negative qualifiers (i.e. "I have a little experience...").
- **Body Language**
  - It is easy to create a negative impression without even realizing that you are doing it. Are you staring at your feet, or talking to the interviewer's shoulder? Be aware of what your actions say about you.
- **Lack of Honesty**
  - The slightest stretching of the truth may result in you being screened out.
- **Negative Attitude**
  - The interview is not an opportunity for you to complain about your current supervisor or co-workers (or even about 'little' things, such as the weather).
- **Lack of Preparation**
  - You have to know about the organization and the occupation. If you don't, it will appear as though you are not interested in the position.
- **Lack of Enthusiasm**
  - If you are not excited about the work at the interview, the employer will not assume that your attitude will improve when hired.

- **Way of Answering**
- Regardless of what type of question you are asked, you will find it easier to respond effectively if you keep in mind some basic question answering strategies:
- You can never predict every question that you will encounter, so approach the interview with an **inventory** of important points. Make a list of the points about yourself that you want the interviewer to know. For example, if you were to apply for a job as a Sales Representative, you might want to list the products you have sold before, types of customers (by industry, age, etc.), languages spoken, personal experience in that industry and related knowledge (perhaps from your academic program).
- Consider each question an opportunity to provide some of this information. Don't assume anything. **You will be evaluated on your answers, not your resume.** Therefore, ensure you incorporate the relevant information from your resume in your answers.
- Pause a couple of seconds before you respond to each question, even if you know exactly what you want to say. Take this time to quickly plan your answer, this helps to avoid misunderstandings and produces much more concise answers.
- If you don't understand a question, ask for clarification. This is expected and is preferable to providing an unsuitable answer. If you need time to collect your thoughts - take it. When people are nervous they tend either to "draw a blank" or to babble. It is better to think for a few moments and make sure that your answer is doing you justice and that there is a point to what you are saying.
- Always expand. Never answer a question with a "yes" or "no."
- The interview is an opportunity for you to sell yourself. Don't be afraid to 'blow your own horn.' As long as you can back up what you are saying with examples which demonstrate that what you are saying is true, you are not bragging. Third party observations can also be mentioned. For example, "My last employer told me that I was promoted because of how I handled conflicts with clients."
- Be very positive. Don't complain about anything - from your former employer to the weather - and don't apologize for experience that you don't have. Just sell what you **do** have and let the employer decide if you have what he/she is looking for. Also, avoid negative words. For example, you would not say "I have a **little** experience....," you would say "I have experience....."
- Don't be afraid to repeat important points. In fact, it is a good idea to do this

## **Your resume:**

**Your resume is the first interface you have with your employer**

Your resume is the first interface you have with your employer. Make the most of this opportunity..... The employment market is changing all the time and so have resumes, evolving from a one-size-fits-all standard. Here are our tips to convert your resume into a catching one.

### **Follow These Basic Standards....**

- Don't overcrowd your resume; allow for plenty of white space.
- Keep your resume to one page whenever possible.

- Keep the number of fonts you use to a minimum -- two at the most.
- Use a font that is easy to read. Times Roman works well.
- Do not justify the lines of type on your resume. Allow the right side of the page to "rag."
- Do not overuse capitalization, italics, underlines, or other emphasizing features.
- Make sure your name, address, and a phone number appear on your resume and all correspondence, preferably at the top of the page.
- Print your resume on white or cream paper using a good-quality printer.
- Second- and third-generation photocopies must be avoided
- Print on one side of the paper only.

### **Avoid Mistakes:**

#### SPELLING MISTAKES:

To avoid spelling mistakes:

- Don't use words with which you aren't familiar.
- Use a dictionary as you write.
- Perform a spell check on your finished resume.
- Carefully read every word in your resume.
- Have a friend or two proof read your resume for you.

#### PUNCTUATION MISTAKES:

Things to look for:

- Periods at the end of all full sentences.
- Be consistent in your use of punctuation.
- Always put periods and commas within quotation marks.
- Avoid using exclamation points.

#### GRAMMATICAL MISTAKES:

Grammar hang-ups to watch for:

- Do not switch tenses within your resume.
- The duties you currently perform should be in present tense (i.e., write reports)
- Duties you may have performed at past jobs should be in past tense (i.e., wrote reports).
- Capitalize all proper nouns.
- When expressing numbers, write out all numbers between one and nine (i.e., one, five, seven), but
- use numerals for all numbers 10 and above (i.e., 10, 25, 108).
- If you begin a sentence with a numeral, spell out that numeral (e.g. Eleven service awards won while employed.).
- Make sure your date formats are consistent (i.e. 11/22/01 or Nov. 22, 2001, or 11.22.01. Choose one and stick with it.).

- Choose Your Words Carefully:
- Phrase yourself well:
- Be on the lookout for the following easily confused words:
  - accept (to receive), except (to exclude)
  - all right (correct), alright (this is not a word)
  - affect (to bring about change), effect (result)
  - personal (private), personnel (staff members)
  - role (a character assigned or a function), roll (to revolve).
- Use action words (i.e., wrote reports, increased revenues, directed staff).

## **REFERENCES:**

In most instances it is not necessary to include names and address of references on the resume. If you include a reference, make it sure that the referenced person knows very well about you. It is also advisable to add the persons as references, whom the employer can contact easily. If possible add the phone number and e-mail ID of the reference. Never add a person as a reference, about whom you know nothing

## **STICK TO THE POINT**

Employers have a busy schedule, so don't expect them to read through a long resume. Ideally, resumes should be of one page, or of two pages only if absolutely necessary, to describe relevant work experience.

## **WORDS COUNT**

Use of language is extremely important; you need to sell yourself to an employer quickly and efficiently. Address your potential employer's needs with a clearly written, compelling resume. Avoid large paragraphs (five or six lines). If you provide small, digestible pieces of information, your resume will be read. Use action verbs. Verbs such as "developed", "managed", and "designed" emphasise your accomplishments. Don't use declarative sentences like "I developed the ..." or "I assisted in ...", leave out the "I". Avoid passive constructions, such as "was responsible for managing". Just say, "managed": that sounds stronger and more active.

## **MAKE THE MOST OF YOUR EXPERIENCE**

Employers need to know what you have accomplished to have an idea of what you can do for them. Don't be vague. Telling someone that you "improved the company's efficiency" doesn't say much. But if you say that you "cut overhead costs by 20 per cent and saved the company Rs 20 lakh during the last fiscal year", you are more specific.

## **HONESTY IS A GOOD POLICY**

Employers will feel more comfortable hiring you if they can verify your accomplishments. There is a difference between making the most of your experience and exaggerating or falsifying it. A falsified resume can cost you the job later.

## **DOUBLE-CHECK FOR MISTAKES**

Check your resume for correct grammar and spelling - evidence of good communication skills and attention to detail. Nothing can ruin your chances of getting a job faster than submitting a resume filled with preventable mistakes. Make your resume easy on the eye. Use normal margins (1" on the top and bottom, 1.25" on the sides) and don't cram your text on the page. Allow for some space between the different sections. Avoid unusual or exotic fonts. Preferred fonts: Arial and Times Roman

At TCS we believe in offering much more than just a job; we strive to give you a full-fledged career. Towards this end we provide you with superior training and the opportunity to work in different industry and service practices on the latest technology platforms.

Developing software for our clients - among whom we count seven Fortune 10 companies - is a fast-paced, challenging and result-oriented endeavour, and we do this in an enjoyable work environment. What TCS offers you is an accelerated career path that you can yourself design as you go along. We also offer a host of other tangible and intangible benefits that will transform you into a world class infotech professional.

### **What's in it for me?**

- Exposure to business excellence and evolving technologies
- Careers across business and technology areas
- Being at the forefront of the e-revolution
- Global exposure - with projects in over 50 countries and 800 clients, many of them Fortune 500 standouts
- World class training, and the opportunity to learn continuously
- An open-door, energetic environment with world-class infrastructure

### **TCS culture**

At TCS we have an energetic and open workplace environment, and a collaborative culture that's based on teamwork. Pulling together is a central tenet of our work ethic.

Energetic and full of enthusiasm, we enjoy our day (and night) at work. Life at TCS is a stimulating and exciting experience. Not only do our offices have the best infrastructure and technology, our colleagues have a knack of working hard — and partying harder.

If you'd like to spend your career in an extremely vibrant, stimulating and fun place, TCS is where you have to be.

We take pride in adhering to the Tata 'code of conduct', which is in place across the entire [\*\*Tata Group\*\*](#). The code is a means of upholding and strengthening the trust reposed on us by our various stakeholders, be it our customers or the wider society.

### **Diversity at work**

TCS is an equal-opportunity employer and TCSers come from many nationalities and speak many languages. And, since we believe in celebrating everything under the sun, you will find us singing carols at Christmas and doing the dandiya dance at Navrathri with equal enthusiasm.

We are also habituated to do the regular outing, be it with our project teams, with Maitree or with just a bunch of other like-minded TCSers. We are off to treks, nature camps, picnics or just bus rides whenever we get the chance.

### **The doors are always open at TCS**

Our senior colleagues follow an open-door policy in which any associate can approach the CEO and senior management with work-related problems.

Communication is a big word at TCS and you will be regularly taking part in webcasts and chat session through which important corporate issues or decisions on real-time basis are shared with associates worldwide.

We also have institutionalised open-house sessions and engagement programmes in which associates at all levels meet and discuss various work issues. In addition, TCSers can also take part in one-on-one sessions where they can interact privately with senior management. These sessions are helpful in providing mentorship, as well as understanding real-life issues that colleagues face at work. The queries and discussions are formally recorded and followed up.

### **The better half of TCS**

Maitree, a fraternity comprising TCSers' spouses, was formed with the objective of bringing the large and geographically widespread TCS community under a common umbrella.

Maitree has two distinct objectives. Primarily, it serves as an information-sharing body where useful tidbits about living in a foreign country Which are the good schools in Minneapolis? Where do you get Indian spices in Stockholm? are shared by TCS employees and their families.

Maitree also functions as a forum where a wide range of socially relevant activities are conducted, be it improving the environment or taking care of the less privileged.

### **Training and Education**

**At TCS we see the training and education of our people as a continuous value-adding process. This approach hones, improves and enhances their skills — and makes the organisation stronger.**

TCS invests about 4 per cent of its annual revenues in training, a shining example of which can be seen at the state-of-the-art training centre in Thiruvananthapuram in the south Indian state of Kerala. Our training modules have been developed to serve the specific needs of individual employees, and are based on their needs at various stages of development in the organisation.

Consider our 'induction training program' (ITP), which is for all our recruits from engineering colleges. This is a specially designed, 77-day training course at the Thiruvananthapuram facility. The ITP is conducted with the objective of transforming engineers from diverse disciplines into software professionals.

Then there are the 'continuing education programs' (CEPs), which cover over 300 topics and can be delivered over a variety of channels: classrooms, computers, audio / video, contact sessions, seminars, conferences and workshops.

Our dedicated training centre in Thiruvananthapuram, established in 1998, sprawls over 58,000 square feet. The centre has 18 classrooms, a library, an auditorium, a conference hall, discussion rooms, and faculty and administrative areas. The facility has about 300 personal computers connected to servers.

TCS has 10 other centers in India fully equipped to conduct any type of training programme.

### TCS PAPER PATTERN

**Pattern 1:**

**Q)**  $(1/2)$  of a number is 3 more than the  $(1/6)$  of the same number?

- a) 6 b) 7 c) 8 d) 9

**Sol:** Let the number be  $x$ ,

$$((1/2)*x)=3+(1/6)*x,$$

Then solve  $x$

**Q)**  $(1/3)$  of a number is 3 more than the  $(1/6)$  of the same number?

- a) 6 b) 16 c) 18 d) 21

**Q)**  $(1/3)$  of a number is 6 more than the  $(1/6)$  of the same number?

- a) 6 b) 18 c) 36 d) 24

**Q)**  $(2/3)$  of a number is 4 more than the  $(1/6)$  of the same number?

- a) 6 b) 8 c) 36 d) 24

**Q)**  $(1/3)$  of a number is 5 more than the  $(1/6)$  of the same number?

- a) 6 b) 36 c) 30 d) 72

**Pattern 2:**

**Q)** There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160.....in tank B. (At the end of first hour, B has 10 liters, second hour it has 20 liters and so on). If tank B is  $1/32$  filled of the 21 hours, what is total duration of hours required to fill it completely?

- a) 26 b) 25 c) 5 d) 27

**Sol:** Given that B fills up at the rate 10, 20, 40 etc...

This is a geometric progression where  $a = 10$   $r = 2$

so after 21 hrs lts in B =  $a * r^{21}$

$$= 10 * 2^{21}$$

This is equal to  $1/32$  volume of B

SO TOTAL VOLUME OF B =  $32 * 10 * 2^{21}$

which is  $= 10 * 2^{26}$

So hrs required to fill up B is 26

Or

for every hour water in tank in B is doubled,

Let the duration to fill the tank B is  $x$  hours.

$x/32$  part of water in tank of B is filled in 21 hours,

Next hour it is doubled so,

$2*(x/32)$  part i.e  $(x/16)$  part is filled in 22 hours,

Similarly  $(x/8)$ th part in 23 hours,  $(x/4)$ th part is filled in 24 hours,

$(x/2)$ th part is filled in 25 hours,  $(x)$ th part is filled in 26 hours

So answer is 26 hours.

**Q)** There are two pipes A and B. If A filled 10 liters in an hour, B can fill 20 liters in same time. Likewise B can fill 10, 20, 40, 80, 160..... If B filled in  $1/16$  of a tank in 3 hours, how much time will it take to fill the tank completely?

- a) 9 b) 8 c) 7 d) 6

**Q)** There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160.....in tank B.  $1/8$  th of the tank B is filled in 22 hours. What is the time to fill the tank fully?

- a) 26 b) 25 c) 5 d) 27

**Q)** A tank is filled with water. In first hour 10 liters, second hours 20 liters, and third hour 40 liters and so on...If time taken to fill  $1/4$  of the tank if 5 hours. What is the time taken to fill up the tank?

- a) 5 b) 8 c) 7 d) 12.5

**Q)** If a tank A can be filled within 10 hours and tank B can be filled  $1/4$  in 19 hours then, what is the time taken to fill up the tank completely?

- a) 21 b) 38 c) 57 d) 76

**Pattern 3:**

**Q)** 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. Hence the current average age has become 45. Find the age of seventh person?

- a) 43 b) 69 c) 52 d) 31

**Sol:**  $a+b+c+d+e+f+Z = 45*7 = 315$

$a+b+c+d+e+f = 12 = 43*6 = 258$

therefore :  $a+b+c+d+e+f = 246$

so age of seventh person "Z" is  $= 315 - 246 = 69$

**Q)** In a market 4 men are standing. The average age of the four before 4 years is 45, after some days one man is added and his age is 49. What is the average age of all?

- a) 43 b) 45 c) 47 d) 49

**Sol:** Avg 4 yrs ago = 45

so avg now = 49

a person of age 49 is added

so avg remains 49

**Q)** In a shopping mall with a staff of 5 members the average age is 45 years. After 5 years a person joined them and the average age is again 45 years. What's the age of 6th person?

- a) 25 b) 20 c) 45 d) 30

**Sol:** After 5 years average age becomes 50

Total age = 250

new member joins suppose age x

so  $(250 + x) / 6 = 45$

$x = 20$

**Q)** In a market 4 men are standing .The average age of the four before 2 years is 55, after some days one man is added and his age is 45. What is the average age of all?

- a) 55 b) 54.5 c) 54.6 d) 54.7

**Sol:** After 2 years average age becomes 57

Total age=228

New member joins, his age is 45

So,  $(228 + 45)/6 = 54.6$  ans

#### Pattern 4:

**Q)** In the reading room of a library, there are 23 reading spots. Each reading spot consists of a round table with 9 chairs placed around it. There are some readers such that in each occupied reading spot there are different numbers of readers. If in all there are 36 readers, how many reading spots do not have even a single reader?

- a) 8 b) none c) 16 d) 15

**Sol:** There are some readers such that in each occupied reading spot there are different numbers of readers.

$1+2+3+4+5+6+7+8= 36$  readers

so , 8 spots have different readers.

remainings are  $23-8= 15$ .

15 spots are empty.

Or

he just said that in each different spot there are different number of readers. So there will be many possibilities...

It is same as number of ways in which you can make a sum of 9 using only digits from 1 to 9 each at most once...

Consider

$1+2+3+6+7+8+9 = 36$

In this case answer is:  $23-7 = 16$

but different answers are possible depending on case u choose

**Q)** In the reading room of a library, there are 10 tables, 4 chairs per table. In each table there are different numbers of people seated. How many tables will be left out without at least 1 person?

- a) 8 b) 6 c) 2 d) 7

**Q)** In the reading room of a library, there are 10 tables, 4 chairs per table. In each table there are different numbers of people seated. How many ways they will sit in the library so that no chair would be blank?

- a) 8 b) 6 c) 2 d) 7

**Sol:** 10 tables, each with 4 chairs

Each table has a different number of persons sitting....This is not possible as there are only 4 chairs..

The different combinations can be 0, 1, 2, 3 and 4...the sixth table would have one of the above combinations..Thus the rule is violated..

Plus, if different numbers of people occupy a table, there would be blank spaces...so how can we calculate the possibilities of the library being fulling occupied..

This is an ambiguous question!

#### **Pattern 5:**

**Q)**A man jogs at 6 mph over a certain journey and walks over the same route at 4 mph. What is his average speed for the journey?

- a) 2.4 mph b) 4.8 mph c) 4 mph d) 5 mph

**Sol:** Average speed= $2*x*y/(x+y)=2*6*4/(6+4)=4.8$  kmph

**Q)**A man travels from A to B at 4 mph over a certain journey and returns over the same route to A, at 5 mph. What is his average speed for the journey?

- a) 4.44 mph b) 4.8 mph c) 4.887 mph d) 5 mph

**Q)**A person is rock climbing at an altitude of 800 m. He go up by 7 mph. and come down by 9 mph. what was his average speed?

- a) 7.875 mph b) 7.125 mph c) 7mph d) 7.5 mph

**Q)**Find average speed if a man travels at speed of 24kmph up and 36kmph down at an altitude of 200m?

- a) 28.8 mph b) 27.8 mph c) 27.5mph d) 30 mph

**Q)**Person travels to a hill, if he goes from A to B with speed of 4kmph and returns back to B with speed of 5kmph. What is his average speed of journey?

- a) 4.5kmph b) 4.44kmph c) 9kmph d) 4.245kmph

**Q)**A man travels from A to B at 70 mph over a certain journey and returns over the same route to A, at 80 mph. What is his average speed for the journey?

- a) 74.66 b) 75 c) 74.33 d) 74.99

**Q)**Find average speed if a man travels at speed of 24kmph up and 36kmph down at an altitude of 200m.

- a) 28.8 b) 28 c) 27 d) 28.6

#### **Pattern 6**

**Q)**Susan made a block with small cubes of 8 cubic cm volume to make a block ,3 small cubes long, 9 small cubes wide and 5 small cubes deep. She realizes that she has used more small cubes than she really needed. She realized that she could have glued a fewer number of cubes together to lock like a block with same dimensions, if it were made hollow. What is the minimum number of cubes that she needs to make the block?

- a) 114 b) 135 c) 21 d) 71

**Sol:** dimensions of small cube =  $2*2*2$

Length of cube = 3 small cubes long = 6 cm

Breadth = 9 small cubes wide = 18 cm

Height = 5 small cubes deep = 10 cm

Volume =  $6*18*10 = 1080\text{cm}^3$

Volume of hollow cube =  $(6-4)(18-4)(10-4)$

=  $168 \text{ cm}^3$

total number of blocks needed =  $1080-168 / 8 = 912/8 = 114$

**Q)**A boy wants to make cuboids of dimension 5m, 6m and 7m from small cubes of .03 m<sup>3</sup>. Later he realized he can make same cuboids by making it hollow. Then it takes some cubes less. What is the number of the cubes to be removed?

- a) 2000 b) 5000 c) 3000 d) 7000

**Sol:** Total volume of cube =  $5 * 6 * 7 = 210 \text{ m cube}$   
volume of smaller cube 0.03

Total cubes reqd = 7000

for hollow cube no. of small cubes reqd =  $5/0.03 * 4 + 6/.03 * 4 + 7/0.03 * 4$

which is approx 2000 so 5000 cubes have to be removed

Note:4 sides of 5,6 and 7 in the cube...so multiplied by 4

**Q)**Smita was making a cube with dimensions 5\*5\*5 using 1\*1\*1 cubes. What is the number of cubes needed to make a hollow cube looking of the same shape?

a) 98 b) 104 c) 100 d) 61

**Sol:** Just count the no. of cubes for each face  
take the 1st one 25 small cubes reqd  
now for 2 faces adjacent to it 20 are reqd  
2 faces adjacent to all these 12 are reqd  
and for the last one 9 are reqd  
so 98

**Q)** Leena cut small cubes of 10 cm dimension each. She joined it to make a cuboid of length 100 cm, width 50 cm and depth 50 cm.  
How many more cubes does she need to make a perfect cube?

- a) 500 b) 250 c) 750 d) 650

**Sol:** Volume left for perfect cube =  $100 \times 100 \times 100 - 100 \times 50 \times 50$

$$\text{No. of cubes reqd} = (100 \times 100 \times 100 - 100 \times 50 \times 50) / 10 \times 10 \times 10 = 750$$

**Q)** Leena cut small cubes of 3 cubic cm each. She joined it to make a cuboid of length 10 cm, width 3 cm and depth 3 cm. How many more cubes does she need to make a perfect cube?

- a) 910 b) 250 c) 750 d) 650

**Q)** A lady builds 9cm length, 10cm width, 3cm height box using 1 cubic cm cubes. What is the minimum number of cubes required to build the box?

- a) 730 b) 270 c) 720 d) 310

**Sol:** no. of cubes required =  $9 \times 10 \times 3 / 1 = 270$

**Pattern 8:**

**Q)**  $(40 \times 40 \times 40 - 31 \times 31 \times 31) / (40 \times 40 + 40 \times 31 + 31 \times 31) = ?$

- a) 8 b) 9 c) 71 d) 51

**Q)**  $(98 \times 98 \times 98 - 73 \times 73 \times 73) / (98 \times 98 \times 98 - 73 \times 73 \times 73) = ?$

- a) .171 b).4 c).420 d).415

**Q)**  $(209 \times 144)^2 + (209 \times 209) + (209 \times 144) + (144 \times 144) = ?$

- a) 905863729 b) 905368729 c) 905729368 d) 65

**Pattern 9:**

**Q)**  $((4x+3y)+(5x+9y)) / (5x+5y) = ?$  as  $(x/2y) = 2$

- a) 8 b) none c) 16 d) 15

**Q)**  $x/2y = 2a$ , then  $2x/x-2ay = ?$

- a) 4 b) 8 c) 16 d) 2

**Q)**  $3X/5Y = 5Y/3X$ ....Find the value of X/Y

- a) 3/5 b) 5/3 c) 2/5 d) 5/2

**Q)** What is the value of  $(3X+8Y)/(X-2Y)$ , if  $X/2Y=2$

- a) 8 b) none c) 10 d) 13

**Q)**  $((4x+3y)+(5x+9y)) / (5x+5y) = ?$  as  $(x/2y) = 2$

- a) 48/5 b) 46/5 c) 47/5 d) 49/5

**Q)**  $((4x+2y)/(4x-2y)) = ?$  as  $(x/2y) = 2$

- a) 8/7 b) 9/7 c) 11/7 d) 6/7

**Pattern 10:**

**Q)** A girl has to make pizza with different toppings. There are 8 different toppings. In how many ways can she make pizzas with 2 different toppings?

- a) 16 b) 56 c) 112 d) 28

**Sol:** The number of ways of choosing r distinct objects from n distinct objects is given by the formula

$$C(n, r) = n! / r!(n-r)!$$

$$\text{where } n! = n(n-1)(n-2) \dots \cdot 3 \cdot 2 \cdot 1$$

If order was important, the number of arrangements is

$$P(n, r) = n! / (n-r)!$$

Now suppose you wanted to display one topping in the middle and the other around the edge, you would be considering arrangements and the answer would be

$$P(8, 2) = 8! / 6!$$

$$= 8^7$$

= 56

However, suppose that you wish to sprinkle toppings randomly over the pizza base. Since it does not matter what the arrangements are, the number of ways is

$$C(8, 2) = 8! / 2!*6!$$

$$= 8*7 / 2*1$$

$$= 56/2$$

$$= 28$$

This is correct.

**Q)**A pizza shop made pizzas with many flavors. There are 10 different flavors, in that 7 flavors are taken to make pizza. In how many ways they can arrange?

- a)240 b)120 c)65 d)210

**Sol:**  $10c7=10c3=120$

**Q)**A pizza shop made pizzas with many flavors. There are 9 different flavors, in that 2 flavors are taken to make pizza. In how many ways they can arrange?

- a)16 b)26 c)36 d)46

**Sol:**  $9c2=9c7=36$

**Pattern 11:**

**Q)**3, 22, 7, 45, 15, ?, , 31

- a)91 b)151 c)90 d)5

**Sol:** we can divide this into two series

Series 1:

$$3, 7, 15, 31$$

Here, every next number =  $2*n + 1$ , where n is the preceding number

Series 2:

$$22, 45, x$$

This is the same as Series 1

$$\text{So, } x = 45*2+1 = 91$$

**Q)**2. 8 6 17 14 35 31 75 \_ 143?

**Sol:** From the given question it is clear that

the difference between the consecutive two digits is 2,3,4,....

$$8-6=2$$

$$17-14=3$$

$$35-31=4$$

$$75-x=5;$$

from the above equation we get that x value is 70

final solution is 70

the series become 8 6 17 14 35 31 75 70 143 137.....

**Q)**Inspired by Fibonacci series Sangeet decided to create his own series which is 1, 2, 3, 7, 7, 22, 15, 67, 31, \_, 63? a)202 b)31 c)76 d)49

**Sol:** Ans=202

bcoz in the given series there are two other series..in the form of

$$1, 2, 3, 7, 7, 22, 15, 67, 31, \_, 63;$$

choose the alternate digits:1,3,7,15,31,63

these are follow the pattern like  $n*2+1$

1

$$3=n*2+1(\text{wher } n=1)$$

$$7=n*2+1(\text{wher } n \text{ is the previous number})$$

$$15=7*2+1(\text{where } n=7)$$

$$31=15*2+1(\text{wher } n=15)$$

$$63=31*2+1(\text{where } n=31)$$

but we dont need this series.just for understanding i gave the above matter

anothe series in the given series in:2 ,7 ,22 ,67 ,\_

we hav to find the number in the blank

this series is in the form of  $n*3+1$

so the series consists of the following numbers 2

$$7=2*3+1(\text{where } n=2)$$

$$22=7*3+1(\text{wher } n=7)$$

$$67=22*3+1 \text{ (where } n=22)$$

for the next number we need to multiply the previous number with 3 and add a 1 to the result

$$\text{finally next digit}=67*3+1=202$$

the final series 1,2,3,7,7,22,15,67,31,**202,63**

**Q)** 3, 12, 7, 26, 15, ?

- a)54 b)27 c)108 d)31

**Sol:** Series 1: 3, 7, 15 ...

Series 2: 12, (12\*2+2)26, (26\*2+2)54 ans

$$\mathbf{Q)} 1! + 2! + \dots + 50! = ?$$

- a)3.1035\*10^64 b)2.1021\*10^65 c)3.1035\*10^63 d)3.1035\*10^62

**Sol:** The answer is 3.10351E+64

There is no formula as such

We can find this by solving it in Microsoft Excel!

**Q)** 1, 2, 3, 6, 7, 14, \_\_, 32?

**Sol:** its obviously 16.

divide in two two pairs such that it is

1-2

3-6

7-14

\_\_-32

see the pattern is going n- n\*2

therefore \_\_-16\*2 gives 16-16\*2

hence answer is 16.

**Q)** 5, 9, 12, 18, 26, 36, 47, 72, \_\_?

- a)75 b)135 c)100 d)55

**Sol:** Series1: 9,18,36,72.... $2^n$

Series2: 5,12,26,47,75....difference is 7 multiples, so ans :75

**Q)** 3, 15, x, 51, 53, 159, 161

- a)17 b)34 c)54 d)112

**Sol:** Difference between the two consecutive numbers is 2; exclude 3 here

consider 17 here then

17-15=2 and next number will be  $17*3=51$

same process continued.

53-51=2 and next number is  $53*3=159$

Ans is 17

### Pattern 12:

**Q)** Simple question but big one on average age.sth like a, b, c weighted separately 1st a, b, c ,then a& b, then b &c ,then c & a at last abc, the last weight was 167,then what will be the average weight of the 7 reading?

- a)95 b)95.428 c)95.45 d)94

**Sol:**  $a+b+c = 167$  given

first a is weighed then b then c then  $a+b$  ,  $b+c$  ,  $c+a$  and lastly  $a+b+c$

so total =  $a + b + c + (a+b) + (b+c) + (c+a) + (a+b+c)$

$$= 4(a+b+c)$$

so avg of 7 weights =  $4/7 * 167 = 95.428$

### Pattern 13:

**Q)** A toy train produces 10 different sounds when it moves around a circular toy track of radius 5 m at 10 m per min. However, the toy train is defective and it now produces only 2 different tunes at random. What are the odds that the train produces for consecutive music tones of the same type?

- a) 1 in 16 B)1 in 4 c)1 in 8 d)1 in 32

**Sol:** it can produce sound A , prob =  $1/2 * 1/2 * 1/2 * 1/2 = 1/8$

or sound B , prob =  $1/8$

so prob of consecutive sound =  $1/8 + 1/8 = 1/4$

or

Total number of cases 2 can be chosen out of 10 =  $10C2 = 45$  ways.

first note in 10 ways , second note in 1 way only.

so prob =  $10/45 = 2$  out of 9

or

First Time choose sound = $1/2$

second

third

fourth

fifth = $1/2$

total= $(1/2)^5=1/32$

**Q)**A car manufacturer produces only red and blue models which come out of the final testing area at random. What are the odds that five consecutive cars of same color will come through the test area at any one time?

- a)1 in 16 b)1 in 125 c)1 in 32 d)1 in 25

**Sol:** Probability that a car is red or blue =  $1/2$

So, probability that each of the five cars are of a color =

Probability that a car is blue + Probability that a car is red

$$= (1/2)^5 + (1/2)^5$$

$$= 2 \cdot (1/2)^5$$

$$= 1/16$$

### Pattern 15:

**Q)**A triangle is made from a rope. The sides of the triangle are 25 cm, 11 cm and 31 cm. What will be the area of the square made from the same rope?

- a)280.5625 b)240.5625 c)280.125 d)240

**Sol:** Length of the rope = 67

Length of side of square =  $67/4$

Area of square =  $(67/4)^2$

**Q)**A triangle is made from a rope. The sides of the triangle are 21 cm, 24 cm and 28 cm. What will be the area of the square made from the same rope?

- a)280.5625 b)333.0625 c)333.0125 d)400

**Sol:** Length of the rope = 73

Length of side of square =  $73/4$

Area of square =  $(73/4)^2$

### Pattern 16:

**Q)**What is the distance between the z-intercept from the x-intercept in the equation  $ax+by+cz+d=0$

**Sol:**  $ax + by + cz + d = 0$

At the z-intercept, 'x' and 'y' are both zero.

$cz + d = 0 \rightarrow z = -d/c \rightarrow$  The z-intercept is the point  $(0, 0, -d/c)$ .

At the x-intercept, 'y' and 'z' are zero.

$ax + d = 0 \rightarrow x = -d/a \rightarrow$  The x-intercept is the point  $(-d/a, 0, 0)$ .

The distance between the points  $(0, 0, -d/c)$  and  $(-d/a, 0, 0)$  is

$$\sqrt{(-d/a)^2 + (-d/c)^2} = \sqrt{d^2/a^2 + d^2/c^2} = d \sqrt{1/a^2 + 1/c^2}$$

### Pattern 17:

**Q)**A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he travelled 1mile in north direction & reached at North Pole. There he saw a bear. He then followed the bear around 1 hr with a speed of 2km/hr in east direction. After that he travelled in south direction & reached at his lab in 2 hrs. Then what is the color of the bear?

- a)white b)black c)gray d)brown

**Sol:** Since it is the north pole, the colour of the bear is white!

As brown and black bears are not found on the poles!

### Pattern-18:

**Q)**Out of 7 children the youngest is boy then find the probability that all the remaining children are boys

- a)1/64 b)1/32 c)1/128 d)1/256

**Sol:** the first result doesn't affect subsequent ones.

for each birth, P[boy] will be 1/2

using the multiplicative principle.,

$P[\text{next 5 are boys}] = 1/2 * 1/2 * 1/2 * 1/2 * 1/2 = 1/32 <-----$

**Pattern 19:**

**Q)** Usha bought a linen cloth and rope to build a tent. If the rope is 153 m long and it is to be cut into pieces of 1m length, then how many cuts are to be made to cut the ropes into 153 pieces?

- a)153 b)152 c)154 d)155

**Sol:** Number of cuts = n - 1

so it will be 152 cuts

**Q)** A person has to make 146 pieces of a long bar. He takes 4 seconds to cut a piece. What is the total time taken by him in seconds to make 146 pieces?

- a)584 b)580 c)730 d)725

**Sol:** Number of cuts=146-1

$145*4=580$

**Q)** A person has to make 141 pieces of a long bar. He takes 2 seconds to cut a piece. What is the total time taken by him in seconds to make 141 pieces?

- a)560 b)280 c)112 d)324

**Sol:** Number of cuts=141-1

$140*2=280$

**Pattern 20:**

**Q)** Spores of a fungus, called late blight, grow and spread infection rapidly. These pathogens were responsible for the Irish potato famine of the mid-19th century. These seem to have attacked the tomato crops in England this year. The tomato crops have reduced and the price of the crop has risen up. The price has already gone up to \$45 a box from \$27 a box a month ago. How much more would a vegetable vendor need to pay to buy 27 boxes this month over what he would have paid last month?

- a) \$27 b)\$ 18 c)\$45 d)\$ 486

**Sol:** Change in price =  $45 - 27 = 18$

So for 27 boxes =  $27 * 18 = 486$

**Pattern 21:**

**Q)** A Person buys a horse for 15 ponds, after one year he sells it for 20 pounds. After one year, again he buys the same horse at 30 pounds and sells it for 40 pounds. What is the profit for that person?

**Sol:**  $20 - 15 = 5$

$40 - 30 = 10$

total Profit=15

**Pattern 22:**

**Q)** John buys a cycle for 31 dollars and given a cheque of amount 35 dollars. Shop Keeper exchanged the cheque with his neighbor and gave change to John. After 2 days, it is known that cheque is bounced. Shop keeper paid the amount to his neighbor. The cost price of cycle is 19 dollars. What is the profit/loss for shop keeper?

- a)loss 23 b)gain 23 c)gain 54 d)Loss 54

**Sol:** Shopkeeper paid 4 \$ to john while giving change

He also paid neighbor 35 \$

Total payment 39 \$

Cost 19 \$

Loss 20 \$

**Pattern 23:**

**Q)** A lady has fine gloves and hats in her closet- 18 blue, 32 red, and 25 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

- a)50 b)8 c)60 d)42

**Sol:** since it is dark....

take worst case

satisfy largest number first.....

since she wants it in pair

32 red

24 yellow

$1+1$  yellow+blue

2 blue

=60

**Q)**A lady has fine gloves and hats in her closet- 14 blue, 20 red, and 18 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

**Sol:** Since its dark....

Take worst case..

Satisfy largest number first....

20 red

18 yellow

2 blue

=40

**Q)**A lady has fine gloves and hats in her closet- 13 blue, 27 red, and 40 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

**Sol:** Since its dark...

Take worst case...

Satisfy largest number first...

40 yellow

26 red

1 +1 red + blue

2 blue

=70

**Q)**A lady has fine gloves and hats in her closet- 25blue, 7 red, and 9 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

**Q)**A lady has fine gloves and hats in her closet- 26 blue, 30 red, and 56 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

#### **Pattern 24:**

**Q)**Sangakara and Ponting selects batting by using a dice, but dice is biased. So to resolve, Ponting takes out a coin. What is the probability that coin shows correct option?

- a)1/2 b)1/6 c)1/12 d)6/10

**Sol:** 1/2

**Q)**There is a die with 10 faces. It is not known that fair or not. 2 captains want to toss die for batting selection. What is the possible solution among the following?

a) If no. is odd it is head, if no. is even it is tail

b) If no. is odd it is tail, if no. is even it is head

c) Toss a die until all the 10 digits appear on top face. And if first no. in the sequence is odd then consider it as tail. If it is even consider it as head.

**Sol:** ans is c

in question itself it will clearly mentioned whether that is it was a not known fair or not. so first we have to check whether it is fair or not. so we toss a die until all the 10 faces appear on top, then only we can decide which one is odd and which one is even

#### **Pattern 25:**

**Q)**In a family there are some boys and girls. All boys told that they are having equal no of brothers and sisters and girls told that they are having twice the no. of brothers than sisters. How many boys and girls present in a family?

- a)4 boys and 3 girls b)3 boys and 4 girls c)2 boys and 5 girls d)5 boys and 2 girls

**Sol:** for each boy in option 1 there are 3 brothers and 3 sisters

for each girl in option 1 there are 2 sisters and 4 brothers

so answer is option 1

#### **Pattern 26:**

**Q)**10men and 10 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa?

- a)22 b)20 c)10 d)none

**Sol:** Since 10 is an even number, and people dance in couples, there wouldn't be a lone dancer.

So never!

**Q)**There are 100 men and 100 women on the dance floor. They want to dance with each other. Then which of the following statements is always true:

- a) There are 2 men who danced with equal no. of women's
- b) There are 2 women who danced with equal no. of men
- a) both a and b b)only a c)only b d)none

**Sol:** none

**Pattern 27:**

**Q)**Middle- earth is a fictional land inhabited by hobbits, elves, dwarves and men. The hobbits and elves are peaceful creatures that prefer slow, silent lives and appreciate nature and art. The dwarves and the men engage in physical games. The game is as follows. A tournament is one where out of the two teams that play a match, the one that loses get eliminated. The matches are played in different rounds, where in every round; half of the teams get eliminated from the tournament. If there are 8 rounds played in knock out tournament, how many matches were played?

- a)257 b)256 c)72 d)255

**Sol:** The number of teams for 8 rounds is:

256->128->64->32->16->8->4->2->1

Thus initially der wer 256 teams.

But wat is askd is the numbr of matches that were played to reach the winner.

The number of matches for 8 rounds is:

128->64->32->16->16->8->4->2->1

$$128+64+32+16+8+4+2+1=255$$

**Q)**A game is played between 2 players and one player is declared as winner. All the winners from first round are played in second round. All the winners from second round are played in third round and so on. If 8 rounds are played to declare only one player as winner, how many players are played in first round?

- a)256 b)512 c)64 d)128

**Sol:** 256

**Pattern 28:**

**Q)**Metal strip of width 'x' cm. 2 metal strips are placed one over the other, then the combine length of 2 strips is 'y'. If 'z' strips are placed in that manner. What is the final width of that arrangement?

**Sol:** only the height of the metal strip changes, the length as well the width of the metal strip remains same...so the answer can be concluded as 'x'

**Q)**A, B, C, D, E are there among A, B, C are boys and D, E are girls D is to the left of A and no girl sits at the middle and at the extremes. Then what is the order of their sittings.

**Sol:** There are two possibilities

Case 1: \_ D A E \_

Case 2: \_E \_ D A

The blanks can be filled by the two boys that are left

Given proper options, we can choose the appropriate one

**Pattern 29:**

**Q)**There is 7 friends (A1, A2, A3....A7).If A1 have to have shake with all **without repeat(distinct=>Permutaion)**. How many handshakes possible?

- a)6 b)21 c)28 d)7

**Sol:** A1 can shake hands with 6 people, A2-A7

A2 can shake hands with 5 people, A3-A7 and so on

If there are n people, there are  $(n-1)!$  ways for them to shake hands.

In this case,  $6!=720$  ways.

**Q)**49 members attended the party. In that 22 are males, 17 are females. The shake hands between males, female, male and female. Total 12 people given shake hands. How many such kinds of such shake hands are possible?

- a)122 b)66 c)48 d)128

**Sol:**  $12C2 = 66$

**Pattern 30:**

**Q)**B is taller than j and 3 pillars. P is shorter than B and 2 pillars is j shorter/taller than P?

- a)yes b)no c)may be d)can't find

**Sol:** According to the first condition,

$B > j + 3 \text{ pillars}$

According to the second condition,

$B + 2 \text{ pillars} > P$

Rewriting the first equation,

$B + 2 \text{ pillars} > j + 5 \text{ pillars}$

Comparing it with the second equation,

we can't say any thing about P and j!

**Q)**There are 1000 pillars for a temple. 3 friends Linda, Chelsey, Juli visited that temple. (Some unrelated stuff) Linda is taller than Chelsea and taller than 2 of 1000 pillars. Julia is shorter than Linda. Find the correct sentence?

- a) Linda is shorter among them
- b) Chelsea is taller than Julia
- c) Chelsea is shorter than Julia
- d) Cannot determine who is taller among Chelsea and Julia

**Sol:**  $J < C < L$  or  $C < J < L$

Therefore ans is d

### Pattern-31

**Q)**Entry ticket to an exhibition ranges from 1p to 31p. You need to provide exact change at the counter. You have 31p coin. In how many parts will u divide 31p so that u will provide the exact change required and carry as less coins as possible?

- a)4 b)5 c)6 d)7

**Sol:**  $2^n \Rightarrow n=0,1,2,3,4 < 2^5(32)$

Since given 31p,

$2^n$  results in 1,2,4,8,16

Through any combination of 1,2,4,8,16 we can acquire any denomination needed at counter.....

So, total 5 combinations

### Pattern 32

**Q)**Peter and Paul are two friends. The sum of their ages is 35 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the present age of Peter?

- a)8 b)20 c)16 d)15

**Sol:** go fr options ..

take 20 as peter's present age den pauls age wud be  $15(20+15)=35..$

also when peter was 15,i.e at the age of paul. $(20-15)=5$ .then pauls age wud be  $(15-5)=10$  and it was double that of peters present age

$\therefore$  optin 2

OR

let pauls age be 'a' and peters be 'e'

$e+a=35$  (given)

$e=35-a$  -----eq1

when peter was as old as paul that is when peter's age was 'a' i.e  $e-(e-a)$  [for example if e was 9 and a was 5,  $e-a$  is 4,  $9-4=5$  so  $e-(e-a)$ ]

pauls age was  $a-(e-a) =2a-e$

now peters age is  $e=2(2a-e)$

$e=4a-2e$

$3e=4a$

$3(35-a)=4a$

$105-3a=4a$

$a=15$

hence  $e=20$

### Pattern 33

**Q)**20 men handshake with each other without repetition. What is the total number of handshakes made?

- a)190 b)210 c)150 d)250

**Sol:** 20th man = 19 handshakes

19th man = 18

....1st man = 0

so we get a series from 1 to 19 handshakes where  $n = 19$   $a = 1$   $d = 1$

So total handshakes = sum of the series =  $n/2(2a+(n-1)d) = 190$

**Q)**10 people are there, they are shaking hands together, how many hand shakes possible, if they are in no pair of cyclic sequence.

- a)45 b)9 c)12 d)10

**Sol:** 10<sup>th</sup> man = 9 handshakes

9<sup>th</sup> man = 8

....1<sup>st</sup> man =0

So we get a series from 1 to 9 handshakes where  $n=9$   $a=1$   $d=1$

So, total handshakes = sum of the series =  $n/2(2a+(n-1)d) = 45$

### Pattern 34

**Q)**If there are 2 wheelers and 4 wheelers parked in a school located at the heart of the city, find the number of 4 wheelers parked

there if there were 20 two wheelers parked there

- a)48 b)50 c)52 d)64

**Sol:** Question incomplete

**Q)**If there are 2 wheelers and 4 wheelers parked in a school located at the heart of the city, find the number of 4 wheelers parked there if there were 58 wheels are parked there

- a)10 b)33 c)22 d)none

**Sol:** no of 4 wheelers are 10.i.e.  $10 \times 4 = 40$  wheels.

$$\text{no. of wheels left} = 58 - 40 = 18$$

$$\text{hence no. of 2 wheelers} = 18 / 2 = 9$$

22 and 33 cant be ans bcz it will make no. of wheels greater than 58

### Pattern 35

**Q)**A man whose age is 45 yrs has 3 sons named John, Jill, jack. He went to a park weekly twice. He loves his sons very much. On a certain day he found the shop keepers selling different things. An apple cost 1penny, 2chocalate costs 1penny & 3 bananas cost 1 penny. He has bought equal number of apple, chocolate & banana for each son. If the total amount he invest is 7 penny then how many he has bought from each piece for his son?

- a)1app,1cho,1 banana b)1 app,2cho,3 banana c)1app,2cho,1banana

**Q)**One person had three children. He had 7 pennies. Find the distribution of the fruits among the three children. A melon costs 1 penny, 2 oranges cost 1 penny and 3 grapes cost 1 penny

- a)2 melons, 1 orange, 1 grape b) 2 melons, 2 orange, 1 grape c) 1 melons, 2 orange, 1 grape.

### PATTERN 36

**Q)**The age of the two friends were in the ration of 6:5.If the sum of their ages is 55.Then after how many years their ratio will become 8:7?

- a)11 b)7 c)10 d)12

**Sol:**  $6x+5x = 55$

$$x = 5$$

so ages 30 and 25

So after 10 yrs 40 and 35

so ratio is 8:7

**Q)**The age of the two friends were in the ration of 6:5.If the sum of their ages is 66.Then after how many years their ratio will become 7:6?

- a)11 b)6 c)10 d)12

**Sol:**  $6x+5x=66$

$$X=6$$

So ages 36 and 30

So after 6 years 42 and 36

So ratio is 7:6

**Q)**The age of the two friends were in the ration of 2:3.If the sum of their ages is 55.Then after how many years their ratio will become 4:5?

- a)11 b)33 c)22 d)44

**Sol:**  $2x+3x=55$

$$X=11$$

So ages 22 and 33

So after 22 years 44 and 55

So ratio is 4:5

### PATTERN 37

**Q)**A volume of 10936 l water is in a container of sphere. How many semi sphere of volume 4l each will be required to transfer all the water into the small semi spheres?

- a)2812 b)8231 c)2734 d)4222

**Sol:** ans =  $10936 / 4 = 2734$

### PATTERN 38

**Q)**A person is manufacturing a house. He bought 20 ropes of wire which has a density of 300 Kg/m<sup>3</sup>.The height of the building to be constructed is 40 m. If the capacity of the current passed in the wire is 20 A and the voltage capacity is 80 Volts.Then what will be the opposing force to the current if the wire is used ?

- a)2 b)4 c)8 d)1600

**Sol:** by ohms law

$$V = IR$$

$$so R = V/I$$

$$so R = 80/20 = 4$$

### PATTERN 39

**Q)**A horse chases a pony 2 hours after the pony runs. Horse takes 3 hours to reach the pony. If the average speed of the horse is

81Kmph.Then what is the average speed of the pony?

- a)46.4 b)51 c)53.4 d)48.6

**Sol:** pony = 2 hours + 3 hours= 5 hours.

horse= 3 hours= 3 hours.

$$3*81=243$$

$243/5=48.6 \Rightarrow$ average speed of pony.

**Q)**A horse chases a pony 3 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 35 kmph, what s the average speed of the pony?

**Sol:** pony = 3 hours + 4 hours= 7 hours.

horse= 4 hours= 4 hours.

$$3*35=105$$

$105/7=15 \Rightarrow$ average speed of pony.

#### PATTERN 40

**Q)**The difference between two no is 9 and the product of the two is 14.What is the square of their sum?

- a)120 b)130 c)137 d)145

**Sol:**  $x-y=9$

$$xy=14$$

$$(x+y)^2-(x-y)^2 = 4xy$$

$$(x+y)^2= 4xy + (x-y)^2$$

$$(x+y)^2= 4*14 + 81$$

$$=137$$

**Q)**The sum of two no is 5 and the product of the two is 14.What is the sum of their squares?

**Q)** The sum of the squares of two no is 12 and their sum is 15.Find the product of the two no?

#### PATTERN 41

**Q)**On planet korba, a solar blast has melted the ice caps on its equator. 9 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of circle, and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4*\sqrt{t-9}$  for  $t \geq 9$  where d represents the diameter in mm and t the number of years since the solar blast.Jagan recorded the radius of some echina at a particular spot as 7mm. How many years back did the solar blast occur?  
a) 17 b)21.25 c)12.25 d)14.05

**Q)**On planet korba, a solar blast has melted the ice caps on its equator. 9 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of circle, and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4* \sqrt{t-9}$  for  $t \geq 9$

Where d represents the diameter in mm and t the number of years since the solar blast.

Jagan recorded the radius of some echina at a particular spot as 12mm. How many years back did the solar blast occur

**Sol:** so

$$d=24 = 12*2$$

now

$$24=4*\sqrt{t-9}$$

$$6^2=t-9$$

$$36+9=t$$

$$t=42$$

#### PATTERN 42

**Q)**A man goes 50Km north , then turned left walked 40Km, then turned right ? In which direction he is?

- a)North b)South c)East d)West

#### PATTERN 43

**Q)**In T.Nagar the building were numbered from 1 to 100.Then how many 4's will be present in the numbers?

- a)18 b)19 c)20 d)21

**Q)**In T.Nagar the building were numbered from 1 to 100.Then how many 6's will be present in the numbers?

- a)18 b)19 c)20 d)21

**Q)**In T.Nagar the building were numbered from 1 to 100.Then how many 1's will be present in the numbers?

- a)18 b)19 c)20 d)21

**Q)**In T.Nagar the building were numbered from 1 to 100.Then how many 0's will be present in the numbers?  
a)18 b)19 c)20 d)11

#### PATTERN 44

**Q)**A number when divided by D leaves a remainder of 8 and when divided by 3D leaves a remainder of 21. What is the remainder left, when twice the number is divided by 3D?

- 13 b) cannot be determined c) 3 d) 42

**Sol:** suppose the no. is a

$$a = Dx + 8 \dots 1$$

$$a = 3Dy + 21 \dots 2$$

So from 1 & 2 we get

$$D(x-3y) = 13$$

13 is prime so  $x-3y$  has to be 1

let  $x = 4$  and  $y = 1$

We get  $a = 60$

$$2a = 120$$

So 120 when divided by 3D = 39

we get remainder as 3

So answer is 3

#### PATTERN 45

**Q)**Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.

- 20.72 b) 5.18 c) 238.25 d) 6.18

**Q)**Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 46 km/hr and the distance traveled by the Ferrari is 953 km, find the total time taken for Rohit to drive that distance.

- 20.72 b) 5.18 c) 238.25 d) 6.18

#### PATTERN 46

**Q)**A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says ' At least n of the statements on this sheet are false. 'Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.  
b) The odd numbered statements are true and the even numbered are false.  
c) The first 35 statements are true and the last 35 are false.  
d) The first 35 statements are false and the last 35 are false.

**Sol:** Suppose the first 35 statements are true!

Statement 1: At least 1 statement is false [TRUE]

Statement 2: At least 2 statements are false [TRUE]

...

Statement 35: At least 35 statements are false [TRUE]

-----  
Statement 36: At least 36 statements are false [FALSE]

..

Statement 40: At least 40 statements are false [FALSE]

-----  
AT LEAST puts the minimum tag or the floor tag on the statements

So, if the first 35 statements are true and the rest are false, everything fits into place!

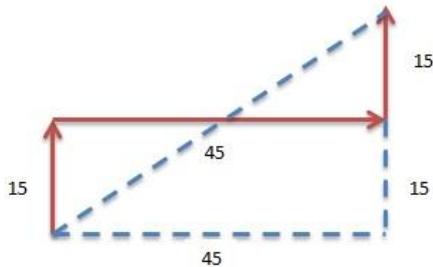
#### PATTERN 47

**Q)**A man goes north 37km.turns left goes 2km.turns right goes 17km.turns right goes 2km. find distance b/w starting ending point.  
a) 54 b) 27 c) 81 d) 67

Try representing the statement as a pictoral representation. The 2 Km turns becomes reversed in the second 2 Km turn.

The total distance travelled therefore is  $17+37 = 54$  Km

**Q)**If a person moves 15km straight and turns 45 km right and moves 15Km staright then how much distance he needs to walk to reach starting point?



#### PATTERN 48

**Q)**If there are 30 cans out of them one is poisoned if a person tastes very little he will die within 14 hours so if there are mice to test and 24 hours to test, how many mice are required to find the poisoned can?

- a) 3 b) 2 c) 6 d) 1

**Sol:** Have 6 mice for testing,

Give each mice contents from 5 cans each

5 5 5 5 5

After 14 hours, one of the mice will die

So, we will know which 5 cans must have the poison

Then , take the contents of these 5 cans and give to the remaining 5 mice each.

We will know in due time which can is poisoned.

#### PATTERN 49

**Q)**If a and b are mixed in 3:5 ration and b and c are mixed in 8:5 ration if the final mixture is 35 liters, find the amount of b?

- A) 13.34 b) 15.73 c) 16.73 d) 9.45

**Sol:** total ratio = 24:40:25

sso b in 35 lts =  $40/89 * 35$

which is 15.73

#### PATTERN 50

**Q)**If we subtract a number with y, we get 4 increase of number, once it got divided by y itself... Find that number??

- A) 13 b) 12 c) 14 d) 11

**Sol:** Let number be x

then  $x - y = x/y + 4$

$\Rightarrow xy - y^2 = x + 4y$

now we need options to solve , one pair can be  $x = 12$  and  $y = 6$

options are incorrect

#### PATTERN 51

**Q)**It is the class with the seating arrangement in 4 rows and 8 columns. When the teacher says 'start' the girl who is sitting in first row and first column will say 1, then the next girl sitting behind her will say 4, the next girl sitting behind that girl will say 7, in a particular order each girl is telling a number, the following girls told 10, 13 next turn is yours what u will say?

- a) 15 b) 17 c) 14 d) 16

**Sol:** 1 4 7 10 13 16

this is the series

#### PATTERN 52

**Q)**It is dark in my bedroom and I want to get two socks of the same color from my drawer, which contains 24 red and 24 blue socks. How many socks do I have to take from the drawer to get at least two socks of the same color?

- A) 2 b) 3 c) 48 d) 25

**Sol:** 3 socks are only reqd to get socks of the same color

**Q)**Lady has 2 select gloves & hat from a basket. In the dark, she can distinguish hat&gloves. 14red, 20blue, 18green r there. Find probability that any selected glove pair has same color.

**Sol:** SAME AS PATTERN 23

**Q)**A lady had fine gloves and hats. 25 blue, 7 red and 9grey. She had to select a pair among them. But there was no light so she had to select in darkness the correct pair with a glove and a hat. Therefore how many combinations of same color she can select?

#### PATTERN 53

**Q)**If the Valentine's Day in 2005 falls on Monday, then on which day will the Valentine's Day fall on 2010?

- A) Saturday b) Thursday c) Wednesday d) Sunday

**Sol:** 14/2/2005 is a Monday

So, from 1/1/2005, days till 14/2/2005 = 31 + 14 = 45

45 mod 7 = 3

Let us say

Saturday = 1

Sunday = 2

Monday = 3

Tuesday = 4

..

Friday = 7

Now, 14/2/2010 is  $365 \times 5 (1/1/2005 \text{ to } 31/12/2009) + 1 (\text{as 2008 is a leap year}) + 31(\text{jan 2010}) + 14(\text{feb 2010}) = 1871$  days from 1/1/2005

1871 mod 7 = 2

So, if 3 = Monday, 2 = Sunday

So, 14/2/2010 is a Sunday!

#### PATTERN 54

**Q)** A person run from A to B. He took  $\frac{1}{4}$  of the time less to reach B when compare to run at normal Speed. Then how many percentage he has increased his speed?

- a) 40 b) 44.4 c) 33.3 d) 22.2

**Sol:** We proceed as follows

$d=s*t$

when  $t_1 = (3/4)t$

then

$d=s_1*t_1$

$s*t = s_1*(3/4)t$

then

$s_1/s = 4/3$

Therefore increase in speed =  $s_1/s - 1 = 1/3$  or  $100/3\% = 33.33\%$

So answer is option 3

**Q)** An athlete decides to run the same distance in  $1/4$ th less time than she usually took. By how much percent will she have to increase her average speed?

- a) 40 b) 44.4 c) 33.3 d) 22.2

**Sol:** let he takes time t at speed s

now new time is  $3/4t$ , so speed will become  $4/3s$

so speed is  $1.33s$ , that is speed increases by 33.3%

hence option 3

#### PATTERN 55

**Q)** In a building there are 5 rooms. Each having a equal area. The length of the room is 4m and breadth is 5 m. The height of the rooms is 2m. If 17 bricks are needed to make a square meter then how many bricks are needed to make the floor of a particular room?

- a) 320 b) 380 c) 340 d) 300

**Sol:** 340 bricks for 1 room considering height of brick as 1 as it is not given

As 17 bricks for 1 sq m

So  $l*b$  for room =  $5*4 = 20$  sq m

So bricks =  $20*17 = 340$

#### PATTERN 56

**Q)** One man want to build a wall. The length and breadth of the wall are 20 and 30 respectively. He need 35 bricks for one square centimeter then how many bricks he need?

- a) 21,500 b) 30,000 c) 21,000 d) 20,000

**Sol:** total area =  $20 * 30 = 600$

so bricks reqd =  $600 * 35 = 21000$

#### PATTERN 57

**Q)** In a hotel we can order two types of varieties, but we can make 6 more variteis in home. One can choose the four varities with two from hotel as must. Find how many ways one can order.

- a) 14 b) 15 c) 56 d) 28

**Sol:** we have to choose 2 out of 6

so answer =  $6C 2 = 15$

**PATTERN 58**

**Q)**If a pipe can fill the tank within 6hrs.But due to leak it takes 30 min more. Now the tank is full then how much time will it take to empty the tank through the leak.?

- a)78 b)56 c)66 d)59

**Sol:** let the leak per hour be  $1/x$ .

$$((1/6)-(1/x)=1/6.5$$

$$\text{so}, 1/x=1/78$$

$$x=78$$

**PATTERN 59**

**Q)**The bacteria has the probability of split into 3 and probability to die is  $1/3$ rd of the total bacteria.Let the probability is P.Some of them survived with probability  $1/5$ .Then which among the following relation is true?

- a) $P=1/3+1/5*3$  b) $P=1/5*(1/8-3)$

**Sol:** First option is correct as , prob to die is  $1/3$  and surviving is remaining which is  $1/5 * 3$  as it becomes 3 times hence option 1

**Q)**There is a bacteria which has the probability of die  $1/3$  of its total number or it may tripled. Find out the probability

- A.  $P=1/3+(2/3*p^3)$  B.  $P=2/3+(2/3*p^3)$  C.  $P=2/3+(1/3*p^3)$  D.  $P=2/3+(2/3*p^3)$

**Sol:** probability of die is  $1/3$

or

its get tripled

the probability of tripled is  $2/3*p*p*p$

thats  $2/3*p^3$

so both the probability combined as  $P=1/3+(2/3*p^3)$

**PATTERN 60**

**Q)**There was a grand mother in a village who had a grand child. Upon asking her grand Childs age she told that she is as older as many days old as her daughters age in weeks and as many days as her own age in years. The sum of the three is 130.then how old is the child.?

**Sol:** as per ur logic ,

the baby is 127 days old...

her mother 2 years old...

and tat old lady is 127 years old..

**PATTERN 61**

**Q)**In T.Nagar the building were numbered from 1 to 100.Then how many 4's will be present in the numbers?

- a)18 b)19 c)20 d)21

**Sol:** 10 4s in units place

10 in 10s place

so answer is 20

**Q)**In Tnagar many buildings were under residential category. For buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many time 6 will appear in building numbering?

**PATTERN 62**

**Q)**Amrith told to Anand in front of a Photo that "He is the son of my father's son". Find who is in the picture if amrith have no brothers and sisters.

- a)Amrith himself b)Amrith's Uncle c)Amrith's Father d)Amrith's son

**Q)**One person has no siblings and says," the guy in the photo is the only son of my father 's son". What is the relation of the guy to the person?

**PATTERN 63**

**Q)**One grand father has 3 grand children two of the age difference is 3.Eldest child age is 3 times the youngest childs age and the eldest child age is two year more than the sum of other two children. Find what is the age of the elders child?

- a)18 b)22 c)30 d)10.

**Sol:** let say, a,b, & c are the children, where a is eldest.

$$a=3c \dots \dots \dots (1)$$

$$b+c+2=a \dots \dots \dots (2)$$

jst check all the options which are dividable by 3. (18 & 30)

$$a=18 \Rightarrow c=6$$

put this value in (2)  $\Rightarrow b=10$ . which is not satisfied the condition (two of the age difference is 3).

if we take a=30, then we get c=10 & b=18. which also not satisfied the condition.

so i think there is a problem with que. or in my understanding.  
please help if there is any mistake in my calculations.

**Q)**One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

**Sol:** consider that the grand child are  $x,y,z$

then based on the conditions we have,

'two of their age difference is 3'

this leads to 3 possibilities

$$x-y=3$$

$$y-z=3$$

$$x-z=3$$

but only one will be correct

'eldest child age is 3 times youngest child's age'

$$x=3z$$

'eldest child's age is two times of sum of other two children'

$$x=y+z+2$$

but since  $x=3z$ ,  $x-z=3$  is not feasible

and again  $x-y=3$  is also not feasible..

so we got,

$$y-z=3$$

$$x=3z$$

$$x=y+z+2$$

we got three equations, 3 unknowns..

this lead to one possibility..

$$x=15$$

$$y=8$$

$$z=5$$

#### PATTERN 64

**Q)**In a school, for a student out of 100 he got 74 of average for 7 subjects and he got 79 marks in the 8th subject. what is the average of all the subject?

- a)76.251 b)80.25 c)74.265 d)74.625

**Sol:** total marks of 8 subjects =  $74*7 + 79 = 597$

$$\text{average} = 597/8 = 74.625$$

#### PATTERN 65

**Q)**3 persons a,b,c were there A always says truth,B lies on Monday,tusday,& Wednesday.but C lies on thrusday,Friday & saturday .one day A said"that B & C said to A that" B said "yesterday way one of the days when I lies",C said that"yesterday way one of the days when I lies too".then which day was that?

- a)Sunday b)Thursday c)Saturday d)Tuesday

**Sol:** If today is Monday, Yesterday was Sunday. Now B should lie on monday so Sunday was NOT one of the days he lies on...Correct. And C shouldn't lie on monday so sunday was one of the days he lies on....Incorrect. So it's not Monday.

If today is Tuesday, Yesterday was Monday. Now B should lie on Tuesday so Monday was NOT one of the days he lies on...Incorrect. So it's not Tuesday.

If today is Weds, Yesterday was Tue. Now B should lie on Weds so Tues was NOT one of the days he lies on...Incorrect. So it's not Weds.

If today is Thurs, yesterday was Weds. Now B should NOT lie on Thurs so Weds was one of the days he lies on....Correct. And C should lie on Thurs so Weds was NOT one of the days he lies on...Correct. So It's THURSDAY.

If today is Fri, yesterday was Thurs. Now B should NOT lie on Fri so Thursday was one of the days he lies on...Incorrect. So It's Not Friday

If today is Sat, yesterday was Fri. Now B should NOT lie on Sat so Fri was one of the days he lies on...Incorrect. So it's Not Saturday.

If today is Sun, yesterday was Sat. Now B should NOT lie on Sun so Sat was one of the days he lies on...Incorrect. So it's NOT Sunday.

Answer: It was on a Thursday

**PATTERN 66**

**Q)**Which is the smallest no which divides 2880 and gives a perfect square?

- a)4 b)9 c)3 d)5

**Sol:** ans d

**PATTERN 67**

**Q)**How many 9 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by 4 if the repetition is allowed?

- a)57 b)56 c)59 d)58

**Q)**how many 13 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by 4 if repetition of digits is allowed?

**Q)**By using 1,2,3,4,5,how many 5 digit no. can be formed which is divisible by 4,repetation of no. is allowed??

**Q)**Form 8 digit numbers from by using 1, 2,3,4,5 with repetition is allowed and must be divisible by4?

**Q)**How many of 14 digit numbers we can make with 1,2,3,4,5 that are divisible by 4. Repetitions allowed.

**PATTERN 68**

**Q)**Consider two tumblers, the first containing Water and next contains coffee. Suppose you take one spoon of water out of the first tumbler and pour it into the second tumbler. After moving you take one spoon of the mixture from the second tumbler and pour it back into the first tumbler . Which one of the following statement holds now?

- a) There is less coffee in the first tumbler than water in the second tumblers
- b) There is more coffee in the firs tumbler than water in the second tumbler
- c) There is as much coffee in the first tumbler as there is water in the second tumbler
- d)None of the statements holds true

**Sol:** Consider 100 mls volume of cup

First 100 mls of ink goes in cola

total mixture in 2nd cup 1100 mls where 100 ink so ink concentration is 1/11

Now in 100 mls of mixture  $1/11 * 100$  mls is ink and  $10/11 * 100$  mls is cola

$10/11 * 100$  mls of ink is left in cola cup whereas we see  $10/11 * 100$  cola goin in ink cup

So same amount in both cups

**Q)**Two bowls are taken, one contains water and another contains tea.one spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl. Which statement will hold good for the above?

**PATTERN 69**

**Q)**Six friends decide to share a big cake. Since all of them like the cake, they begin quarreling who gets to first cut and have a piece of the cake. One friend suggests that they have a blindfold friend choose from well shuffled set of cards numbered one to six. You check and find that this method works as it should simulating a fair throw of a die. You check by performing multiple simultaneous trials of picking the cards blindfold and throwing a die. You note that the number shown by the method of picking up a card and throwing a real world die, sums to a number between 2 and 12. Which total would be likely to appear more often – 8,9 or 10?

- a) 8 b)All are equally likely c)9 d)10

**Sol:** 8 will have higher probability as

for 8

(2,6) (6,2) (3,5) (5,3) and (4,4)

which is greater than 9 or 10

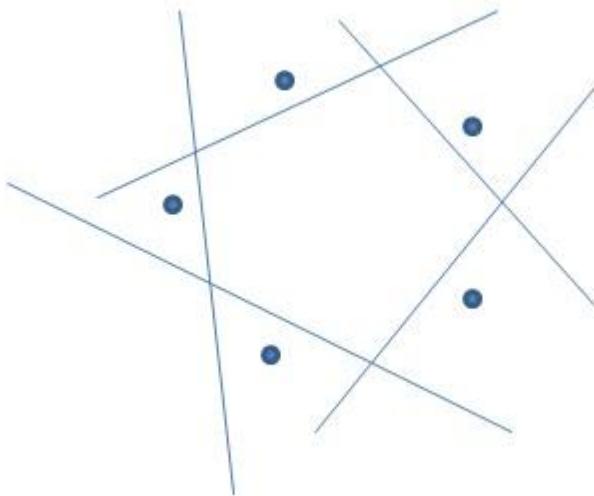
so answer is 8

**PATTERN 70**

**Q)**Given a collection of points P in the plane , a 1-set is a point in P that can be separated from the rest by a line, .i.e the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The minimum value of  $n_1(P)$  over all configurations P of 5 points in the plane in general position (.i.e no three points in P lie on a line) is

- a) 3 b)5 c)2 d)8

**Sol:**

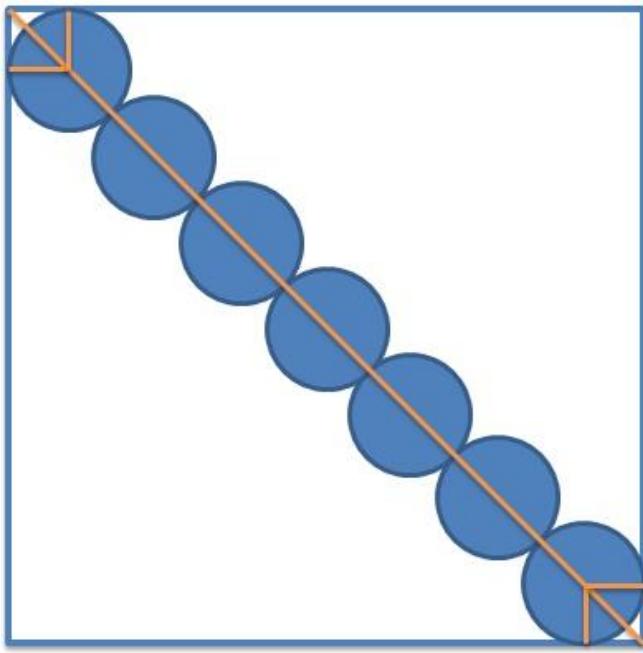


Arrange points in a circle..so answer is 5

#### PATTERN 71

**Q)**Anoop managed to draw 7 circles of equal radii with their centres on the diagonal of a square such that the two extreme circles touch two sides of the square and each middle circle touches two circles on either side. Find the ratio of the radius of the circles to the side of the square.

- a)1:(2+ 7/2)
- b)(2+ 7/2):1
- c)1:(4+ 7/3)
- d)1:(2+ 6/2)



1) Let radius of each circle be "x"

**Sol:** The extreme circles will have radius perpendicular to sides..so the part of diagonal till the centre of circle will be  $\sqrt{2}r$  [Make diagram and it will be clear]..now remaining portion is  $r$  , 5 more circles will contribute  $10r$  and last circle will contribute  $\sqrt{2}r + r$ .

total  $12r + 2\sqrt{2}r = \sqrt{2}$  side  
so ratio of  $r:s = 1/2+6\sqrt{2}$

**Q)**An orange glass has orange juice. and white glass has apple juice. Both equal volume 50ml of the orange juice is taken and poured into the apple juice. 50ml from the white glass is poured into the orange glass. Of the two quantities, calculate the amount of apple juice in the orange glass and the amount of orange juice in the white glass

**Sol:** To look simple assume both glasses have 200ml juice. 50ml orange from glass1 added to apple in glass2. So glass1 have 150ml orange and glass2 have 250ml (200ml apple+50ml orange). In glass2 clearly, for every 1 ml of orange, there is 4 ml of apple. So if you take 50ml, there will be [40ml apple + 10ml orange]. It is added to glass1. Now glass1 has [160ml org + 40ml app]. Subtract the same amount from glass2, it will have [160ml app + 40ml org]. But see the question, apple in orange glass= 40ml and orange in white glass=40ml. So both are equal.

**Q)**Alok and Bhanu play the following min-max game. Given the expression  $N=40+X+Y-Z$ , where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable: Assuming both play to their optimal strategies, the value of N at the end of the game would be:

**Sol:** Numbers from 0 to 9 [0 1 2 3 4      5 6 7 8 9]

1) Let alok choose 0, without thinking bhanu will place it in X or Y. (Since 0 is part of lower values, see above)

2) So the expression becomes  $40+X-Z$ . Now if alok chose 9 bhanu will keep in Z. So it becomes  $31+X$ . Now alok will choose 9 in order to maximise. Now sum becomes 40. (Now Continued from step 2 only i.e after the expression became  $40+X-Z$ . Don't think of step 1. It is explained later below. ) But alok has better way. He chose 5, then bhanu places it in Z (because 5 is a part of higher value). Expression becomes  $35+X$ . Now alok will choose 9. So final value =44. Remember that the max value and min value for the expression  $(X-Z)$  will always be 4 if they play optimal strategies. Try keeping different values, you can get upto max of 44 only if they play optimal strategies.

3) Now see step 1. Alok can increase the value of Y upto 4. (Bhanu still places it in Y as it is lower value) So he can get upto 48.

4) Now first let alok chose 5,

case i) Bhanu places it in Z. Expression becomes  $35+X+Y$ . Alok must choose two 9's to maximize. So it is  $35+18=53$

case ii) Bhanu places it in Y or X (doesn't matter). Now the expression becomes  $45+X-Z$ . Remember max or min value of  $(X-Z)$  can be 4 only. So value of expression  $= 45+4=49$ . Clearly (case ii) is lower. So if alok chose 5 bhanu should place in X or Y.

5) But alok is clever. He chose 6 as first number. Follow step 4 again. You get 2 cases. Now max value is 50.

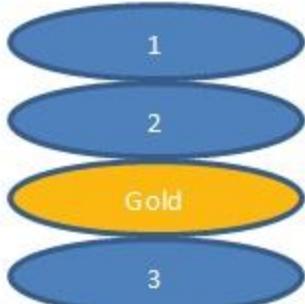
6) Alok chooses 7 as first number. Now see that the value becomes 51 in both cases of step 4. So here bhanu can place it in any variable, it doesn't matter.

7) But if alok chose 8 as his first number. (case i) of step 4 becomes  $40+18-8 =50$ . So alok does not use 8 at all. So 51 remains max value for alok and min value for bhanu.

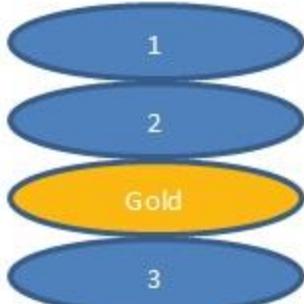
**Q)** Alice and Bob play the following coins-on-a-stack game. 50 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack. Alice starts and the players take turns. A turn consists of moving the coin on the top to a position  $i$  below the top coin. We will call this an  $i$ -move (thus a 0-move implies doing nothing). The proviso is that an  $i$ -move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coins the third coin from the top. Then

- a) In order to win, Alice first move should be a 0-move.
- b) In order to win, Alice first move should be a 1-move.
- c) Alice has no winning strategy.
- d) In order to win, Alice first move can be a 0-move or a 1-move

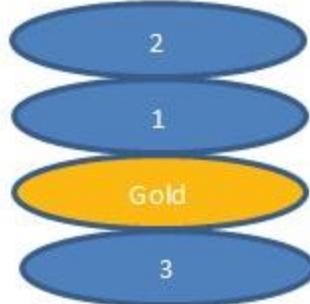
**Sol:**



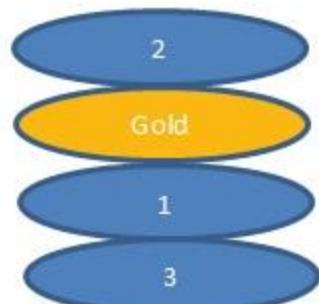
**Initial position**



**0-Move**



**1-Move**



**2-Move**

Look at the figures and understand moves. **All the moves shown here are with respect to initial position only**  
See that 0-move does nothing.

Let O stand for an ordinary coin and G stand for the gold coin

Initially,

$O_1-O_2-G-O_3-O_4-\dots-O_{20}$

Suppose Alice does the 1-move. Then,

$O_2-O_1-G-O_3-O_4-\dots-O_{20}$

Then Bob can follow two paths

1. Bob does a 0-move
2. Bob does a 2-move or a higher move

1. If Bob does a 0-move, A cannot do a 1-move or 0-move. So, A would do a 2-move or a higher move. Then,

$O_1-G-O_3-\dots-O_{20}$

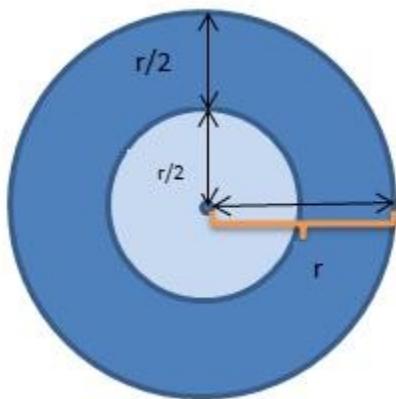
Bob then cannot do a 0-move. So A wins

2. If Bob does a 2-move or higher, A would do a 0-move and win!

So, for A to win, 1-move is the best strategy!

**Q)**A circular dashboard of radius 2.0 foot is at a distance of 20 feet from you. You throw a dart at it and it hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

**Sol:** Here the distance 20 feet is irrelevant. Don't think of it. Now see the diagram below:



Consider the general situation i.e radius =  $r$ . Now we divide the dart board into two halves. Any point in the inner circle is clearly closer to the center than periphery since we have divided the circle as  $r/2$  and  $r/2$ . The dart can hit at

any point in the circle. So total sample space is whole area of the circle =  $(\pi)(r^2)$ -----eq(1). Now we need to find area of the inner circle. Its  $(\pi)*(r/2)^2= (\pi)*(r^2/4)$ -----eq(2). Probability is (required event)/(sample space) = eq(2)/eq(1) =  $1/4=0.25$ .

# **APTITUDE QUESTIONS**

## **FROM**

## **PLACEMENT CELL**

### Type of Questions

Interviewers use five different types of questions - directive, non-directive, hypothetical, behavior descriptive, and stress. Being aware of the different types can help you in the preparation stage as you build your skills inventory. It may also help you focus in on exactly what is being asked and what the employer is looking for in specific questions.

#### Directive Questions

The interviewer determines the focus of your answer. The information that the interviewer wants is very clear. If you have completed the research on yourself, this type of question should be easy to answer.

Example: "What skills do you have that relate to this position?"

"I have very good communication and interpersonal skills that I have refined through several summer and part-time jobs working with the public. In addition, I am fluent in both English and French."

#### Non-Directive Questions

You determine the focus of your answer. The interviewer asks a general question and does not ask for specific information. The most common non-directive question is

"Tell me about yourself."

When answering the question, keep in mind that the employer is interested in knowing how your background and personality qualify you for the job. In your answer, you should cover four areas: your education, related experience, skills and abilities, and personal attributes. As you talk about these areas, relate them to the job you are seeking. Decide what your response will be before starting to speak, this helps to keep responses concise.

Example: " Tell me about yourself."

"I have a Bachelor of Arts Degree in Psychology, and have recently completed the course

in Volunteer Management through the Volunteer Center of Winnipeg. These have given me a strong background in many of the principles of human behavior and the recruitment, training, and supervision of volunteers. I have experience in working with young adults in a helping capacity, both through my position as a Peer Advisor at the University of Manitoba, and as a camp counselor at a camp for behaviorally troubled adolescents. Both of these positions involved individual counseling, facilitating discussion groups, and teaching young people about health issues - all of which relate directly to the services which I would be training volunteers to provide within your organization. In addition, I thoroughly enjoy working with young people, and can establish rapport with them easily."

### Hypothetical or Scenario Questions

When asking a hypothetical question, the interviewer describes a situation, which you may encounter in the position and asks how you would react in a similar situation. This is a good way to test problem-solving abilities. When answering this type of question, try applying a simple problem solving model to it – gather information, evaluate the information, priorities the information, seek advice, weigh the alternatives, make a decision, communicate the decision, monitor the results and modify if necessary.

Example: "Suppose you are working your first day in our laboratory, and a fire at a nearby work station breaks out. What would you do?"

"Before I start working in any laboratory, I always locate the emergency equipment, such as eye washes, fire blankets and alarms. I would also review the safety protocols. So in this situation, I would be aware of these. As soon as I noticed the fire, I would shut down my experiment and if the fire is significant, I would pull the firm alarm and help to evacuate the lab. In the case of very small flame, I would ask the staff member at the station what I could do to help, Which would vary with the type of substances involved."

### Behavior Descriptive or Behavioral Questions

This type of question is becoming increasingly popular in interview situations. It asks what you did in a particular situation rather than what you would do. Situations chosen usually follow the job description fairly closely. Some employers feel that examples of past performance will help them to predict future performance in similar situations. There is no right or wrong answer to this type of question, but keep in mind that you should relate the answer to the position. If you are interviewing for a research position, talk about a research project you completed.

Example: "Give me an example of a work situation in which you were proud of your performance."

"While working as a sales representative for XYZ Company for the summer, I called on Prospective clients and persuaded them of the ecological and economic benefits of Recycling. I also followed up on clients to ensure that they were satisfied with the service They received. This involved both telephone and in-person contacts. I increased sales 34% over the same period in the previous year."

When preparing for this type of questioning, it is crucial that you review the skills and qualities that the position would require and identify specific examples from your past which demonstrated those traits.

### Stress Questions

Some questions will surprise you and possibly make you feel uncomfortable during an interview. For

Example: " Which do you prefer, fruits or vegetables?" There are many reasons why an interviewer might ask such questions. They may want to see how you react in difficult situations, or they may simply be trying to test your sense of humor. Such questions may directly challenge an opinion that you have just stated or say something negative about you or a reference.

Sometimes they ask seemingly irrelevant questions such as,

"If you were an animal, what type of animal would you be?"

The best way to deal with this type of question is to recognize what is happening. The interviewer is trying to elicit a reaction from you. Stay calm, and do not become defensive. If humour comes naturally to you, you might try using it in your response, but it is important to respond to the question. What you say is not nearly as important as maintaining your composure.

Example: "Which do you like better, Lions or Tigers?"

"Oh, lions definitely. They appear so majestic and are very sociable. To be honest, I think that seeing The Lion King four times has probably contributed to this!"

### Quantitative

1. 1.If  $g(0)=g(1)=1$
2. And  $g(n)= g(n-1) + g(n-2)$  find  $g(6)$ ;
3. 2.A plane moves from  $9^{\circ}N 40^{\circ}E$  to  $9^{\circ}N 40^{\circ}W$ . If the plane starts at 10 am and takes 8 hours to reach the destination, find the local arrival time.
4. If  $\log 0.317=.....$  and  $\log 0.318=.....$  Then find the value of  $\log 0.319$ .

5. 4. You will be given the bit position values for A, B and C and using the relation ( $A \oplus B$ )  $\cup$  C you have to construct the truth table. Then find the corresponding decimal number and choose the right option.
6. 5. Complete the sequence 9, 10, 11, 13, 15, \_\_, 21, 28.
7. 6. In a certain format TUBUJPO is coded as STATION. The code of which string is FILTER?
8. What is the code formed by reversing the First and second letters, the third and fourth letters and so on of the string SIMULTANEOUSLY?
9. 8. The base 5 representation of the decimal number 2048 is \_\_\_\_.
10. 9. Which is the largest prime number that can be stored in a 9-bit register?
11. 10. Find the physical quantity represented by  $MOMENTUM * VELOCITY] / [LENGTH * ACCELERATION]$ ?
12. 11. A can do a piece of work in 20 days, which B can do in 12 days. In 9 days B does  $\frac{3}{4}$  of the work. How many days will A take to finish the remaining work?
- 13.

ANNA University-Campus Recruitment July2003

QUANTITATIVE AND LOGICAL REASONING.

1. In a two-dimensional array, X (9, 7), with each element occupying 4 bytes of memory, with the address of the first element X (1, 1) is 3000, find the address of X (8, 5).

ANS: 3212

2. In the word ORGANISATIONAL, if the first and second, third and forth, forth and fifth, fifth and sixth words are interchanged up to the last letter, what would be the tenth letter from right?

ANS: I(ROANISATIONALG)

- 2E. In the word ORGANISATIONAL, if the first and second, third and forth, fifth and sixth words are interchanged up to the last letter, what would be the tenth letter from right?

ANS: I(ROAGINASITNOLA)

3. What is the largest prime number that can be stored in an 8-bit memory?

ANS: 127

4. Select the odd one out. a. Java b. Lisp c. Smalltalk d.Eiffel.

ANS: LISP

5. Select the odd one out a. SMTP b. WAP c. SAP d. ARP

ANS: SAP

6. Select the odd one out a. Oracle b. Linux c. Ingress d. DB2

ANS:LINUX

7. Select the odd one out a. WAP b. HTTP c. BAAN d. ARP

ANS:BAAN

8. Select the odd one out a. LINUX b. UNIX c.SOLARIS d. SQL SERVER

ANS:SQL SERVER

9. Select the odd one out a. SQL b. DB2 c.SYBASE d. HTTP

ANS:HTTP

10. The size of a program is N. And the memory occupied by the program is given by  $M = \text{square root of } 100N$ . If the size of the program is increased by 1% then how much memory now occupied?

11. A man, a woman, and a child can do a piece of work in 6 days. Man only can do it in 24 days. Woman can do it in 16 days and in how many days child can do the same work?

ANS:16

12. In which of the system, decimal number 194 is equal to 1234?

ANS:5

13. Find the value of the 678 to the base 7.

ANS:1656

14. Number of faces, vertices and edges of a cube

14. ANS:6,8,12

15. Complete the series 2, 7, 24, 77, \_\_

ANS:238

16. Find the value of  $\text{@} @+25-++\text{@} 1\dots$ , where @ denotes "square" and + denotes "square root".

ANS:121

17. Find the result of the following \_expression if, M denotes modulus operation, R denotes round-off, T denotes truncation:

$$M(373,5)+R(3.4)+T(7.7)+R(5.8) \text{ ANS:19}$$

18. If TAFJHH is coded as RBEKGI then RBDJK can be coded as -----

ANS:PCCKJ

19.  $G(0)=-1, G(1)=1, G(N)=G(N-1) - G(N-2), G(5)= ?$

ANS:-2

20. What is the max possible 3 digit prime number?

ANS:

21. A power unit is there by the bank of the river of 750 meters width. A cable is made from power unit to power a plant opposite to that of the river and 1500mts away from the power unit. The cost of the

cable below water is Rs. 15/- per meter and cost of cable on the bank is Rs.12/- per meter.

Find the total of laying the cable.

ANS:20250

22. The size of a program is N. And the memory occupied by the program is given by  $M = \text{square root of } 100N$ . If the size of the program is increased by 1% then how much memory now occupied?

23. In Madras, temperature at noon varies according to  $-t^2/2 + 8t + 3$ , where t is elapsed time. Find how much temperature more or less in 4pm to 9pm.

ANS: 385.8(DB)

24. The size of the bucket is N kb. The bucket fills at the rate of 0.1 kb per millisecond. A programmer sends a program to receiver. There it waits for 10 milliseconds. And response will be back to programmer in 20 milliseconds. How much time the program takes to get a response back to the programmer, after it is sent?

ANS: 30MILLISECOND

25. A man, a woman, and a child can do a piece of work in 6 days. Man only can do it in 24 days. Woman can do it in 16 days and in how many days child can do the same work?

26. If the vertex (5,7) is placed in the memory. First vertex (1,1) ?s address is 1245 and then address of (5,7) is -----

27. Which of the following are orthogonal pairs?

a.  $3i+2j$  b.  $i+j$

c.  $2i-3j$  d.  $-7i+j$

ANS: (A)& (C).

28. If VXUPLVH is written as SURMISE, what is SHDVD?

ANS: PEASA

29. If A, B and C are the mechanisms used separately to reduce the wastage of fuel by 30%, 20% and 10%. What will be the fuel economy if they were used combined.

ANS: 20%

30. What is the power of 2? a. 2068 b. 2048 c. 2668

ANS: (B). 2048

31. Complete the series. 3, 8, --, 24, --, 48, 63

ANS: 15,35

32. Complete the series. 4, -5, 11, -14, 22, ---

ANS: -27

33. A, B and C are 8 bit no?s. They are as follows:

A 1 1 0 1 1 0 1 1

B 0 1 1 1 1 0 1 0

C 0 1 1 0 1 1 0 1

Find ( (A-B) u C )=?

Hint :

A-B is {A} - {A n B}

ANS: 0 1 1 1 1 1 1 (DB)

A Flight takes off at 2 A.M from northeast direction and travels for 11 hours to reach the destination which is in north west direction. Given the latitude and longitude of source and destination. Find the

local time of destination when the flight reaches there?

ANS: 1:00 P.M

35. A can copy 50 papers in 10 hours while both A & B can copy 70 papers in 10 hours.

Then for how many hours required for B to copy 26 papers?

ANS: 13

36. A is twice efficient than B. A and B can both work together to complete a work in 7 days. Then find in how many days A alone can complete the work?

ANS: 10.5 DAYS(11)

37. A finish the work in 10 days. B is 60% efficient than A. So hoW days does B take to finish the work?ANS : 4DAYS.

38. A finishes the work in 10 days & B in 8 days individually. If A works for only 6 days then how many days should B work to complete A?s work?

ANS : 3.2 DAYS(4)

39. Given the length of the 3 sides of a triangle. Find the one that is impossible? (HINT : sum of smaller 2 sides is greater than the other one which is larger)

40. Find the singularity matrix from a given set of matrices?(Hint  $\det(A) == 0$ )

41. A 2D array is declared as  $A[9,7]$  and each element requires 2 byte.If  $A[ 1,1 ]$  is stored in 3000. Find the memory of  $A[8,5] ?$

ANS: 3106.

42. Sum of slopes of 2 perpendicular st. lines is given. Find the pair of lines from the given set of options which satisfy the above condition?

43. (a)  $2+3i$  (b)  $1+i$  (c)  $3-2i$  (d)  $1-7i$  .Find

which of the above is orthogonal.

ANS : (A) & (C).

44. (Momentum\*Velocity)/(Acceleration \* distance ) find units.

ANS:MASS

45. The number 362 in decimal system is given by  $(1362)_x$  in the X system of numbers find the value of X a}5 b) 6 c) 7 d) 8 e) 9

46. Given \$ means Tripling and % means change of sign then find the value of \$\$\\$6-\%\\$%6

ANS : -72

47. My flight takes of at 2am from a place at 18N 10E and landed 10 Hrs later at a place with coordinates 36N70W. What is the local time when my plane landed.

a) 6:00 am b) 6:40am c)7:40 d)7:00

e)8:00 (Hint : Every 1 deg

longitude is equal to 4 minutes . If west to east add time else subtract time)

ANS: (E) 8:00

48. Find the highest prime number that can be stored in an 8bit computer.

49. Which of the following set of numbers has the highest Standard deviation?

1,0,1,0,1,0

-1,-1,-1,-1,-1,-1

1,1,1,1,1,1

1,1,0,-1,0,-1

50. Match the following:

1. Male - Boy --->

a. A type of

2. Square - Polygon --->

b. A part of

3. Roof - Building --->

c. Not a

type of

4. Mushroom - Vegetables ---> d.

A superset of

Ans: 1- d, 2- a, 3- b, 4- c

51. Match the following.

1. brother - sister

---> a. Part of

2. Alsatian - dog --->

b. Sibling

3. sentence - paragraph --->

c. Type of

4. car - steering

---> d. Not a type

of

Ans. 1-b, 2-c, 3-a, 4-d

15. PART II QUANTITATIVE APTITUDE ,TIME 20 Min. MARKS :30.

---

1. Two pencils costs 8 cents, then 5 pencils cost how much  
(Ans:20 cents).

2. A work is done by the people in 24 min. one of them can do  
this work a lonely in 40 min. how much time required to do the  
same  
work for the second person.

(ans:60 min.)

3. A car is filled with four and half gallons of oil for full  
round

trip. fuel is taken  $\frac{1}{4}$  gallons mor3 in going than coming. what is  
the fiel consumed in coming up? (2 gallons)

4. low temperature at the night in a city is  $\frac{1}{3}$  more than  $\frac{1}{2}$   
hinge as higher temperature in a day. sum of the low temp and  
higherst temp is 100C. then what is the low temperature (40 C)

5. A person who decided to go weekend trip should not exceed 8  
hours

driving in a day Average speed of forward journey is 40 mph. due  
to

traffic in sundays, the return journey average speed is 30 mph.  
how far he can select a picnic spot (120 miles).

6. A sales person multiplied a number and get the answer is 3,  
instead of that number divided by 3. what is th answer he actually  
has to get ? ( $\frac{1}{3}$ ).

7. A ship started from port and moving with I mph and another ship  
started from L and moving with H mph. At which place these two  
ships

meet ? ( Ans is between I and J and close to J)

! \_\_\_\_ ! \_\_\_\_ ! \_\_\_\_ ! \_\_\_\_ ! \_\_\_\_ !

port G H I J K L

8. A building with height D ft shadow upto G A neighbour building with what height shadow C ft is (B ft.)

! \_\_\_\_ ! \_\_\_\_ ! \_\_\_\_ ! \_\_\_\_ ! \_\_\_\_ ! \_\_\_\_ !  
A B C D E F G H

9. A person was fined for exceeding the speed limit by 10mph. Another person was also fined for exceeding the same speed limit by twice the same. If the second person was travelling at a speed of 35 mph. find the speed limit (15 mph)

16. 10. A bus started from bustand at 8.00a m and after 30 min stayingat destination, it returned back to the bustand. the destination is 27 miles from the bustand. the speed of the bus 50 percent fastspeed.  
at what time it returns to the bustand (11.00)

17. 11.in a mixture, R is 2 parts, S is 1 part. in order to make S to 25% of the mixture, howmuch R is to be added ( one part).  
12. wind flows 160 miles in 330 min, for 80 miles how much time required. 13. with 4/5 full tank vehicle travels 12 miles, with 1/3 ful ltank how much distance travels ( 5 miles).  
14. two trees are there. one grows at 3/5 of the other. in 4 years, total growth of trees is 8 ft. what growth will smaller tree will have in 2 years. (<2ft)  
15. A storm will move with a velocity of towards the center in hours. At the same rate how much far will it move in hrs. (but Ans is 8/3 or 2 2/3).

1. If two pencils cost 8 cents, then how much do 5 pencils cost?

18. **Ans. 20 cents**

19.

2. Some work is done by two people in 24 minutes. One of them can do this work alone in 40 minutes. How much time does the second person take to do the same work ?

20. **Ans. 60 minutes**

21.

3. A car is filled with four and half gallons of fuel for a round trip.If the amount of fuel taken while going is 1/4 more than the amount taken for coming, what is the amount of fuel consumed while coming back?

22. **Ans.2 gallons**

23.

4. The lowest temperature in the night in a city A is 1/3 more than 1/2 the highest during

the day. Sum of the lowest temperature and the highest temperature is 100 degrees. Then what is the low temp?

24. **Ans. 40 degrees**

25.

5. Javagal, who decided to go to weekened trip should not exceed 8 hours driving in a day. The average speed of forward journey is 40 miles/hr.Due to traffic on sundays, the return journey's average speed is 30 m/h. How far he can select a picnic spot?

- a) 120 miles
- b) between 120 and 140 miles
- c) 160 miles

26. **Ans. 120 miles**

27.

6. A salesperson by mistake multiplied a number and got the answer as 3, instead of dividing the number by 3.What is the answer he should have actually got?

28. **Ans. 3**

29.

7. A building with height D shadow upto G. What is the height of a neighbouring building with a shadow of C feet.

30. **Ans.  $(C*D)/G$**

31.

8. A person was fined for exceeding the speed limit by 10 mph. Another person was also fined for exceeding the same speed limit by twice the same. If the second person was travelling at a speed of 35 mph, find the speed limit.

32. **Ans. 15 mph**

33.

9. A bus started from bustand at 8.00am, and after staying for 30 minutes at a destination, it returned back to the busstand. The destination is 27 miles from the busstand. The speed of the bus is 18mph. During the return journey bus travels with 50% faster speed.At what time does it return to the busstand?

34. **Ans. 11.00am**

35. 10. In a mixture, R is 2 parts and S is 1 part. In order to make S to 25% of the mixture, how much of R is to be added?

36. **Ans. One part of R**

37.

11. Wind flows 160 miles in 330 min, for travelling 80 miles how much time does it require?

38. **Ans. 2 hrs 45 mins**

39.

12. With a  $\frac{4}{5}$  full tank a vehicle can travel 12 miles, how far can it travel with a  $\frac{1}{3}$  full tank

40. **Ans. 5 miles**

41.

13. There are two trees in a lawn. One grows at a rate  $\frac{3}{5}$  of the other in 4 years. If the total growth of trees is 8 ft. What is the height of the smaller tree after 2 years

42. **Ans. 1 1/2 feet**

- 43.
14. Refer to the figure below. A ship started from P and moves at a speed of I miles per hour and another ship starts from L and moving with H miles per hour simultaneously. Where do the two ships meet?
44. ||---g---||---h---||---i---||---j---||---k---||---l---||
45. PG H I J K L are the various stops in between denoted by || . The values g, h, i, j, k, l denote the distance between the ports.
46. **Ans. Between I and J, closer to J**
- 47.
15. If A is travelling at 72 km per hour on a highway. B is travelling at a speed of 25 meters per second on a highway. What is the difference in their speeds in m/sec.
48. **Ans. 1 m/sec**
49. **IV SECTION**
50. There are 150 weights . Some are 1 kg weights and some are 2 kg weights. The sum of the weights is 260. What is the number of 1kg weights?
51. **Ans. 40**
52. A is driving on a highway when the police fines him for overspeeding and exceeding the limit by 10 km/hr. At the same time B is fined for overspeeding by twice the amount by which A exceeded the limit. If he was driving at 35 km/hr what is the speed limit for the road?
53. **Ans. 15 kmph**
- 54.
3. A moves 3 kms east from his starting point . He then travels 5 kms north. From that point he moves 8 kms to the east. How far is A from his starting point?
55. **Ans. 13 kms**
- 56.
4. A car travels 12 kms with a 4/5th filled tank. How far will the car travel with 1/3 filled tank?
57. **Ans. 5 kms**
- 58.
5. The sum of the digits of a two digit number is 8. When 18 is added to the number, the digits are reversed. Find the number?
59. **Ans. 35**
- 60.
6. The cost of one pencil, two pens and four erasers is Rs.22 while the cost of five pencils, four pens and two erasers is Rs.32. How much will three pencils, three pens and three erasers cost?
61. **Ans. 27**
- 62.
7. Fathers age is 5 times his son's age. 4 years back the father was 9 times older than son. Find the fathers' present age.
63. **Ans. 40 years**
- 64.
8. What number should be added to or subtracted from each term of the ratio 17 : 24 so that it becomes equal to 1 : 2.

65. Ans. 10 should be subtracted
- 66.
9. What is the 12th term of the series 2, 5, 8, ....
67. Ans. 35
- 68.
10. If 20 men take 15 days to complete a job, in how many days can 25 men finish that work?
69. Ans. 12 days
- 70.
11. In a fraction, if 1 is added to both the numerator and the denominator, the fraction becomes  $\frac{1}{2}$ . If numerator is subtracted from the denominator, the fraction becomes  $\frac{3}{4}$ . Find the fraction.
71. Ans.  $\frac{3}{7}$
- 72.
12. If Rs.1260 is divided between A, B and C in the ratio 2:3:4, what is C's share?
73. Ans. Rs. 560
- 74.
13. A shopkeeper bought a watch for Rs.400 and sold it for Rs.500.What is his profit percentage?
75. Ans. 25%
- 76.
14. What percent of 60 is 12?
77. Ans. 20%
- 78.
15. Hansie made the following amounts in seven games of cricket in India: Rs.10, Rs.15, Rs.21, Rs.12, Rs.18, Rs.19 and Rs.17(all figures in crores of course).Find his average earnings.
79. Ans. Rs.16 crore
80. \*\*\*\*

81. Quantitative:

1. 3 angles or 3 sides r given.Which will form a triangle?

2. units of basic quantities :

1.  $(\text{energy} * \text{time} * \text{time}) / (\text{mass} * \text{dist}) = \text{distance}$

2.  $(\text{momentum} * \text{velocity}) / (\text{force} * \text{time}) = \text{velocity}$

3."&" is for doubling the value "%" is for change of sign then what is the value

5-&%&5 Ans-30 (Check)

3. 58,27,12,x,2,1. Find x.

4. R-rounding off, M-modulus, T-truncate

M(893,10)+r( )+t( ) is asked

5.vertices edges and surfaces of a cube Ans-8,12,6

6.Sums on Recursive functions

7.Questions on General computer awareness

Pick the odd one.....

1.http 2.arp 3.snmp 4.sap Ans-sap

1.linux 2.windows NT 3.sql server 4.Unix Ans-Sql server

Another.....ans-Smtp

Ans-MVS

8. Which of the following is a singular matrix. (Determinant must be zero)

9. Aeroplane is flying at a particular angle and latitude,after some time another latitude is given..(8 hrs later), u r asked to find the local time of the place.

10.a series of letters are given

how many Ws r followed by F and preceded by T.

11. 7,9,13,\_,27,37. Ans-19

12.SURFW Code is translated as SHEET.....these kinda ques r there.....

13.194 base 10 = \_\_\_\_ base 5 (1234)

14.Largest prime no. in a 6 bit,8 bit (Ans 127),9 bit microprocessor

15.Venn Diagram kinda ques.

Some know English, some French,some German.....how many know two languages.....

16.Bar Diagram, Pie Chart (similar to Data interpretation)

17. Code Interchanging, A word is given.... Letters are reversed..u r asked to find the nth letter from right or left....Eg.

DESTABILIZATION Ans-T

18. Sums on logarithms, e power x curves.

19.  $n = 68 \times 12 \times 51$

Which of the follg is not an integer

82. Ans-  $n/122$

20. Which is a/not a power of 2 or 3.

Power of 4 Ans-4096

21. A-- 1 0 10 10 (Not exact values)

83. 1. Which Is The Smallest No Divides 2880 And Gives A Perfect Square?

A.1 B.2 C.5 D.6

Ans: C

2. Two Bowls Are Taken, One Contains Water And Another Contains Tea Equal Amount . One Spoon Of Water From 1st Is Added To Second Bowl And Mixed Well, And A Spoon Of Mixture Is Taken From Second Bowl And Added To The 1st Bowl. Which Statement Will Hold Good For The Above?

{

Thought Process :

Water Bowl Tea Bowl

100 100

$90w + 10w =$  Spoon Volume

$100tea + 10water$

$90w + (10 * 10/11)Tea + 10/11 W = 100t - (10 * 10/11) T$

$+ 10w - 10/11w$

(1st Bowl's Water Volume Is Equal To 2nd Bowls Tea Volume)

3. Form 8 Digit Numbers From By Using 1, 2,3,4,5 With Repetition Is Allowed And Must Be Divisible By 4?

A.31250 B.97656 C.78125 D.97657

Ans: C

4. Rearrange And Categorize The Word 'Rapeteka'?

Ans: Bird

5. One Problem On  $(785^3 - 235^3)/(785^2 + 785 * 235 + 235^2)$

Ans: You Are Free To Carry A Calculator With You But You Should Not Use It To Solve This Kind Of Problem. Because It Is Simple:

$$A^3 - b^3 / A^2 + ab + b^2$$

Ans Is :  $A - b$  Here  $785 - 235 = 550$  That's It.

6. In School There Are Some Bicycles And 4 Wheeler Wagons. One Tuesday There Are 190 Wheels In The Campus. How Many Bicycles Are There?

Ans: 15

Thought Process :  $B^2 + w^4 = 190$  I.E. ,  $B + 2w = 95$  Now See U Can Not Solve 2 Unknowns From 1 Equation, So Just Plot Options Here To Get The Right Answer And Verify If You Are Getting Integers As Values Of B And W.

7. There Are Two Persons Paul And Jay .Paul Lies On Monday, Tuesday, Wednesday And The Remaining Days He Speaks Truth. Jay Lies On Thursday, Friday, Saturday And The Remaining Days He Speaks Truth. Once They Meet Each Other, In Their Conversation Paul Says That Yesterday Is The Day One Among Those I Lie. Jay Also Says That Yesterday I Also Lie. What Is That Day?

A) Sunday. B) Tuesday. C) Thursday. D) Wednesday

[Thought Process: Now This Day Cannot Be Sunday Because In Monday Paul Speaks Truth And Sunday Everyone Tells Truth. So It Must Be Weekdays. Again, Tuesday Can Not Possible Because Monday And Tuesday Paul Speaks Truth. In Case Of Thrust Day, Paul Speaks Lie And Wednesday He Speaks True. And Joy Speaks Truth In Thursday And He Speak Lies In Wednesday. So, Thursday Is The Answer.

8. A Father Has 7 Penny's With Him And 1 Water Melon Is For 1p, 2chickoos For 1p, 3 Grapes Foe 1p. He Has Three Sons. How Can He Share The Fruits Equally?

Ans: 1 Watermelon, 2chickoos, 1grape

9.  $(1/2)$  Of A Number Is 3 Times More Than The  $(1/6)$  Of The Same Number?

Ans: 9

10. There Are Two Pipes A And B. If A Filled 10 Liters In Hour B Can Fills 20 Liters In Same Time. Likewise B Can Fill 10, 20, 40, 80,160.... If B Filled In  $(1/16)$  Th Of A Tank In 3 Hours, How Much Time Will It Take To Fill Completely?

Ans: 7 Hours

11. A Man Is Standing Before A Painting Of A Man And He Says I Have No Bro And Sis And His [Painted Picture] Father Is My Father's Son?

Ans: His Son

12. One Question Has Last Part Like Difference Between Two Terms Is 9 And Product Of Two Numbers Is 10, What Is The Squares Of Sum Of Numbers?

Ans: Thought Process :  $A - b = 9$  And  $Ab = 10$

$$A + b = \text{Sqrt}[9^2 + 4 * 10] = 11$$

A= 10 And B=1 So 101 Ans.

13. What Is The Value Of  $(3x+8y)/(X-2y)$ ; If  $X/2y=2$ ?

Ans:10 {The Numerical May Change}

14. One Grandfather Has Three Grandchildren, Two Of Their Age Difference Is 3, Eldest Child Age Is 3 Times Youngest Child's Age And Eldest Child's Age Is Two Times Of Sum Of Other Two Children. What Is The Age Of Eldest Child?

Ans:15

15 . In One Organization, Material, Labor And Maintenance Are In The Ratio Of 4:6:7, The Material Cost Is: Rs. 100, What Is The Total Cost?

Ans: 425

16. Keywords: Density, Reluctance, Sensitivity, Voltage, Current, What Is The Resistance Formula Is “ $r=V/I$ ”

17. In A Market 4 Man Are Standing .The Average Age Of The Four Before 4 Years Is 45, After Some Days One Man Is Added And His Age Is 49. What Is The Average Age Of All?

Ans: 49

18. In A School For A Student Out Of A 100 He Got 74 Of Average For 7 Subjects And He Got 79 Marks In 8th Subject. What Is The Average Of All The Subjects?

Ans: 74.625

19. In A Question ,Last Part Has, The Ages Of Two People Has The Ratio Of 6:6 And By Adding The Numbers We Get 44, After How Many Years The Ratio Would Be 8:7?

Ans: 8

20. One Train Travels 200m From A To B With 70 Km/Ph And Returns To A With 80kmph, What Is The Average Of Their Speed?

Ans: Use Harmonic Mean Formula: Average Speed =  $2ab/A+b = 2*70*80/150$

21. A Question Like A Wire Is Wound Whose Resistance Is Some 132. 44647 Ohms. If A Voltage Of 30 mv, 296 Ma Current Is Applied To It What Is The Resistance.

Clue: Use Formula  $R= V/I$ . Beware Of Voltage & Current Particularly Kilo Or Millie Etc. Units.

22. In A City, There Are 100 Buildings Numbered By Corporation Between 0-100, How Many Twos Are Shown In Door,

Ans: 2,12,20,21,22,23,24,25,26,27,28,29,32,42,52,62,72,82,92=(20 Twos)

23) A Hollow Space On Earth Surface Is To Be Filled. Total Cost Of Filling Is Rs20000. The Cost Of Filling Per Mt3 Is Rs 225 .How Many Times A Size Of 3 Mt3 Soil Is Required To Fill The Hollow Space?

Ans:  $20000/225=88.88$

88.88/3=29.62

So 30 Times Of 3 Mt3 Is Required To Fill The Space Completely

24) There Are Different Things Like P,Q,R,S,T,U,V. We Can Take P And Q Together. If R And S Are Taken Together Then T Must Has To Be Taken. U And V Can Be Taken Together Can Be Taken With P Or S. Every Thing Can Be Taken Together Except  
A) P B) T C) V D) S

Ans: T

25) New Town Is Straight To The North Of New York. A High Way M Runs From Newtown Making An Angle Of 61 Degree South East. From New York There Is Also An High Way N Which Runs Northeast 61 Degrees. If High Ways M And N Are Straight Then Find out The Acute Angle Made At Their Intersection Point.

Ans:  $180-(61+61)=58$  (The High Ways Make A Triangle The Addition Of 18. One Grandfather Has Three Grandchildren, Two Of Their Age Difference Is 3, Eldest Child Age Is 3 Times Youngest Child's Age And Eldest Child's Age Is Two Times Of Sum Of Other Two Children. What Is The Age Of Eldest Child?

Ans: 15

26). In A Market 4 Man Are Standing .The Average Age Of The Four Before 4years Is 45,Aftyer Some Days One Man Is Added And His Age Is 49.What Is The Average Weight Of All?

Ans: 49

27) Keywords: One Organization ,Material Labor And Maintenance Are In The Ratio Of 4:6:7,The Material Cost Is:100,What Is The Total Cost?

Ans: 425

28). Keywords: Density, Reluctance, Sensitivity, Voltage ,Current, What Is The Resistance Formula Is “ $r=V/I$ ”

29). Keywords: Sports Readers,10 Tables,4chairs Per Table, Each Table Has Different Number Of People Then How Many Tables Will Left Without At Least One Person?  
Ans : 6

30). Keywords: Die, Card, Coin, B/N 2 To 12

Ans: All Are Equal

31). In A School For A Student Out Of A 100 He Got 74 Of Average For 7 Subjects And He Got 79 Marks In 8th Subject. What Is The Average Of All The Subjects?

Ans: 74.625

32). In A Question ,Last Part Has ,The Ages Of Two People Has The Ratio Of 6:6 And By Adding The Numbers We Get 44,After How Many Years The Ratio Would Be 8:7?

Ans: 8

3 Angles Of A Triangle Is 180)

### Section 3:Critical Reasoning: Two Passages Are Given

1. Which Of The Following Best Completes The Passage Below?  
In A Survey Of Job Applicants, Two-fifths Admitted To Being At Least A Little Dishonest. However, The Survey May Underestimate The Proportion Of Job Applicants Who Are Dishonest, Because \_\_\_\_.

A. Some Dishonest People Taking The Survey Might Have Claimed On The Survey To Be Honest

B. Some Generally Honest People Taking The Survey Might Have Claimed On The Survey To Be Dishonest

C. Some People Who Claimed On The Survey To Be At Least A Little Dishonest May Be Very Dishonest

D. Some People Who Claimed On The Survey To Be Dishonest May Have Been Answering Honestly

E. Some People Who Are Not Job Applicants Are Probably At Least A Little Dishonest Answer With Explanation:

A Is The Best Answer.

If Applicants Who Are In Fact Dishonest Claimed To Be Honest, The Survey Results Would Show A

Smaller Proportion Of Dishonest Applicants Than Actually Exists. Therefore, This Choice Is The

Best Answer. B Is Inappropriate Because Generally Honest Applicants Who Claimed To Be

Dishonest Could Contribute To The Overestimation, But Not To The Underestimation, Of Dishonest

Applicants. D Is Inappropriate Because Applicants Who Admitted Their Dishonesty Would Not

Contribute To An Underestimation Of The Proportion Of Dishonest Applicants. C And E Are

Inappropriate Because The Argument Is Concerned Neither With Degrees Of Dishonesty Nor With

The Honesty Of Non-applicants.

2. The Average Life Expectancy For The United States Population As A Whole Is 73.9 Years, But

Children Born In Hawaii Will Live An Average Of 77 Years, And Those Born In

Louisiana, 71.7 Years. If A Newlywed Couple From Louisiana Were To Begin Their Family In Hawaii, Therefore, Their Children Would Be Expected To Live Longer Than Would Be The Case If The Family Remained In Louisiana. Which Of The Following, If True, Would Most Seriously Weaken The Conclusion Drawn In The Passage?

- A. Insurance Company Statisticians Do Not Believe That Moving To Hawaii Will Significantly Lengthen The Average Louisianan's Life.
- B. The Governor Of Louisiana Has Falsely Alleged That Statistics For His State Are Inaccurate.
- C. The Longevity Ascribed To Hawaii's Current Population Is Attributable Mostly To Genetically Determined Factors.
- D. Thirty Percent Of All Louisianans Can Expect To Live Longer Than 77 Years.
- E. Most Of The Hawaiian Islands Have Levels Of Air Pollution Well Below The National Average For The United States.

#### 84. APTITUDE QUESTIONS

85. 1.A man is standing in front of a painting of a man, and he tells us the following: Brothers and sisters have I none, but this man's father is my father's son. Who is on the painting?
- A. His son
  - B. His grandfather
  - C. His father
  - D. He himself
- Ans: a
86. A sheet of paper has statements numbered from 1 to 30. For all values of n from 1 to 30, statement n says "At most n of the statements on this sheet are false". Which statements are true and which are false?
- All statements are true.  
The even numbered statements are true and the odd numbered are false.  
All statements are false.  
The odd numbered statements are true and the even numbered are false.
87. 3.Planet fourfi resides in 4-dimensional space and thus the currency used by its residents are 3-dimensional objects. The rupee notes are cubical in shape while their coins are

spherical. However the coin minting machinery lays out some stipulations on the size of the coins. The diameter of the coins should be at least 64mm and not exceed 512mm.

Given a coin, the diameter of the next larger coin is at least 50% greater.

The diameter of the coin must always be an integer.

You are asked to design a set of coins of different diameters with these requirements and your goal is to design as many coins as possible. How many coins can you design?

5,9,6,8

Ans: c (hint: first coin has length 64 mm, 2nd coin diameter length  $64 + (50/100) * 64$ , 3rd coin 2nd coin's diameter length +  $50/100$  of 2nd coin's length, in that way go till you reach maximum diameter length 512! now think!)

88. The pacelength P is the distance between the rear of two consecutive footprints. For men, the formula,  $n/P = 144$  gives an approximate relationship between n and P where, n = number of steps per minute and P = pacelength in meters. Bernard knows his Pacelength is 164cm. The formula applies to Bernard's walking. Calculate Bernard's walking speed in kmph.

23.62

11.39

8.78

236.16

Ans: a

89. 5. A hollow cube of size 5 cm is taken, with a thickness of 1 cm. It is made of smaller cubes of size 1 cm. If 4 faces of the outer surface of the cube are painted, totally how many faces of the smaller cubes remain unpainted?

800

500

488

900

Ans: side of cube = 5 cm

its thickness = 1 cm

so volume of outer cube =  $5*5*5$

volume of inner cube =  $3*3*3$

volume of the hollow cube =  $5*5*5 - 3*3*3 = 98$

so total no of small cubes of the size 1 cm =  $98/1*1*1 = 98$

we know a cube has 6 faces so total no of face =  $98*6 = 588$

one surface of outer cube contains a total of 25 surface of smaller cube, so when 4 surface of outer cube is painted total no of surface of small cubes i.e supposed to be painted is  $4*25 = 100$

so the total no of surfaces of small cube that will be remained unpainted is  $588 - 100 = 488$

90. 6. A person drives with constant speed and after some time he sees a milestone with 2 digits. Then travels for 1 hours and sees the same 2 digits in reverse order. 1 hours later he sees that the milestone has the same 2 digits with a 0 between them. What is the speed of the car?

54.00 mph

45.00 mph

27.00 mph

36.00 mph

91. 7.india with a burgeoning population and a plethora of vehicles (at last count there were more than 20 million of them) has witnessed big traffic jams at all major cities. Children often hone their counting skills by adding the wheels of vehicles in schoolyards or bus depots and guessing the number of vehicles.

Alok, one such child, finds only bicycles and 4 wheeled wagons in his schoolyard. He counts the total number of wheels to be 46. What could be the possible number of bicycles?

25

5

4

Ans: 5

let y be the number of bycycles,x be number of 4 wheelers

then  $2x+4y=46$

by trial and error substitute value of x and give suitable values for y

if x=5 and y=9 then eqn satisfied

92. 8.10 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true?

A. All suspects are lying or the leftmost suspect is innocent.

B. All suspects are lying and the leftmost suspect is innocent .

A only

B only

Neither A nor B

Both A and B

93.. A lady has fine gloves and hats in her closet- 18 blue, 32 red, and 25 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

(A)50

(B)8

(C)60

(D)42

Ans:60

There can be lots of logic for this, but approach the simplest one so that we approach to one of the solutions. Suppose the lady first picks 32 Red gloves, and then 24 Yellow gloves. The next pair she picks will be one Yellow and One Blue which does not make a pair. The next two will be blue gloves. So she makes a total of  $32+24+1+1+2 = 60$  picks.

94. 10. One day Rapunzel meets Dwarf and Byte in the Forest of forgetfulness. She knows that Dwarf lies on Mondays, Tuesdays and Wednesdays, and tells the truth on the other days of the week. Byte, on the other hand, lies on Thursdays, Fridays and Saturdays, but tells the truth on the other days of the week. Now they make the following statements to Rapunzel – Dwarf: Yesterday was one of those days when I lie. Byte: Yesterday was one of those days when I lie too. What day is it?

(A) Thursday

- (B) Tuesday
- (C) Sunday

(D) Monday  
Ans: Thursday

95. Explanation : On Thursday, Dwarf says truth. i.e Yesterday(Wednesday) was one of those days when I lies. Its true. On the other hand, On Thursday, Byte lies. i.e Yesterday(Wednesday) was one of those days when I lie too. Its a lie.... So both satisfied. Hence its Thursday.

96. 11. The teacher is testing a student's proficiency in arithmetic and poses the following question.

1/3 of a number is 3 more than 1/6 of the same number. What is the number?

Can you help the student find the answer?

- (A) 12
- (B) 18
- (C) 6
- (D) 21

Ans:  $x/3 = 3 + x/6$

so,  $x=18$

97. 12. A greengrocer was selling apple at a penny each, chickoos at 2 for a penny and peanuts at 3 for a penny. A father spent 7p and got the same amount of each type of fruit for each of his three children. What did each child get?

- (A) 1 apple, 1 Chickoos, 1 peanut
- (B) 1 apple, 2 chickoos, 2 peanuts
- (C) 1 apple, 2 chickoos, 1 peanut
- (D) 1 apple, 3 chickoos, 2 peanuts

Ans: Go from options 1 apple , 2 chickoos , 1 peanut ::::::::::::: 3 children are there so he have to buy 3 apples for dat 3 penny's. similarly for 2 chickoos each child he have to buy 6 chickoos for dat 3 penny's and 1 peanut for each child he have to buy 3 peanuts for that 1 penny. So total 7

98. 13. Here 10 programmers, type 10 lines within 10 minutes then 60 lines can type within 60 minutes. How many programmers are needed?

- a) 16 b) 6 c) 10 d) 60

Ans: C) 10

use the formula man\*hour=day

$$10 * 10 = 10$$

$$x * 60 = 60$$

divide eqn 1 by 2 and find x!

99. 14. The citizens of planet nigiet are 8 fingered and have thus developed their decimal system in base 8.

A certain street in nigiet contains 1000 (in base 8) buildings numbered 1 to 1000.

How many 3s are used in numbering these buildings?

- (A) 54
- (B) 64
- (C) 265
- (D) 192

Ans: d

Consider 3 in one's place. The possible numbers are

3,13,23....,73

103,113....,173....

703,713...773

i.e  $8 \times 8 = 64$  times.

Similarly consider 10's place

70,71,71...77

170,171,...177....

770,771...777

Again  $8 \times 8 = 64$

Now to hundred's place

700,701...707....

770,771...777

Again  $8 \times 8 = 64$

so total  $64+64+64=192!$

100. 15. Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line, i.e the point lies on one side of the line while the others lie on the other side.

The number of 1-sets of P is denoted by  $n_1(P)$ . The minimum value of  $n_1(P)$  over all configurations P of 5 points in the plane in general position (i.e no three points in P lie on a line) is

(A) 3

(B) 5

(C) 2

(D) 1

Ans: b Arrange the points in a circle

101. 16. Hare in the other. The hare starts after the tortoise has covered  $1/5$  of its distance and that too leisurely. A hare and a tortoise have a race along a circle of 100 yards diameter. The tortoise goes in one direction and the hare and tortoise meet when the hare has covered only  $1/8$  of the distance. By what factor should the hare increase its speed so as to tie the race?

(A) 37.80

(B) 8

(C) 40

(D) 5

Ans: a

102. 17. Alice and Bob play the following coins-on-a-stack game. 20 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack.

Alice starts and the players take turns. A turn consists of moving the coin on the top to a position  $i$  below the top coin ( $0 = i = 20$ ). We will call this an  $i$ -move (thus a 0-move implies doing nothing). The proviso is that an  $i$ -move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coin is the third coin from the top. Then

- (A) In order to win, Alice's first move should be a 1-move.
- (B) In order to win, Alice's first move should be a 0-move.
- (C) In order to win, Alice's first move can be a 0-move or a 1-move.
- (D) Alice has no winning strategy.

Consider the situation of a 1-move

---C---  
---C---  
---G---

C represents the normal coin and G the gold coin. So Alice makes a 1-move, which does not have any effect on the arrangement. Next Bob has to make a 0-move or 2-move. If he makes a 0-move, there is no change and if he make a 2-move, the G goes up by one step. If Bob makes a 2-move, then Alice can do a 0-move and win the game.

103. 18. 36 people {a<sub>1</sub>, a<sub>2</sub>, ..., a<sub>36</sub>} meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs, {a<sub>1</sub>, a<sub>2</sub>}, {a<sub>2</sub>, a<sub>3</sub>}, ..., {a<sub>35</sub>, a<sub>36</sub>}, {a<sub>36</sub>, a<sub>1</sub>}. Then size of the smallest set of people such that the rest have shaken hands with at least one person in the set is

- (A)12
- (B)11
- (C)13
- (D)18

Ans: a

Understand the question, we have to find the minimum set, so that all other people shake hand to the selected set of people. Let me take an example of 6 people.

{a<sub>1</sub>,a<sub>2</sub>,a<sub>3</sub>,a<sub>4</sub>,a<sub>5</sub>,a<sub>6</sub>} Now if we include a minimum set {a<sub>2</sub>,a<sub>5</sub>} all other people are shaking hands with them. So if its 2 for 6(1/3rd) then its  $36/3=12$

104. 19. After the typist writes 12 letters and addresses 12 envelopes, she inserts the letters randomly into the envelopes (1 letter per envelope). What is the probability that exactly 1 letter is inserted in an improper envelope?

- (A)1/12
- (B)0
- (C)12/212
- (D)11/12

Ans: b

Becoz At least two letter will be inserted in the improper envelop number

105. 20. There is a toy train that can make 10 musical sounds. It makes 2 musical sounds after being defective. What is the probability that same musical sound would be produced 5 times consecutively?

106. 21. By using 1,2,3,4,5, how many 12 digit no. can be formed which is divisible by 4, Repetition of no. is allowed?

107. 22. Alchemy is an occult tradition that arose in the ancient Persian empire. Zosimos of Panopolis was an early alchemist. Zara, reads about Zosimos and decides to try some experiments. One day, she collects two buckets, the first containing one litre of ink and the second containing one litre of cola. Suppose she takes one cup of ink out of the first bucket and pours it into the second bucket. After mixing she takes one cup of the mixture from the second bucket and pours it back into the first bucket. Which one of the following statements holds now?

- A. There is more cola in the first bucket than ink in the second bucket.  
 B. There is as much cola in the first bucket as there is ink in the second bucket.  
 C. There is less cola in the first bucket than ink in the second bucket
108. 23. Given a collection of points  $P$  in the plane, a 1-set is a point in  $P$  that can be separated from the rest by a line; i.e. the point lies on one side of the line while the others lie on the other side. The number of 1-sets of  $P$  is denoted by  $n_1(P)$ . The maximum value of  $n_1(P)$  over all configurations  $P$  of 19 points in the plane is 18 9 3
109. 24. 15 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true?  
 A. All the suspects are lying.  
 B. The leftmost suspect is guilty.  
 B only
110. 25. Alchemy is an occult tradition that arose in the ancient Persian empire. Zosimos of Panopolis was an early alchemist. Zara, reads about Zosimos and decides to try some experiments. One day, she collects two buckets, the first containing one litre of ink and the second containing one litre of cola. Suppose she takes one cup of ink out of the first bucket and pours it into the second bucket. After mixing she takes one cup of the mixture from the second bucket and pours it back into the first bucket. Which one of the following statements holds now?  
 A. There is more cola in the first bucket than ink in the second bucket.  
 B. There is as much cola in the first bucket as there is ink in the second bucket.  
 C. There is less cola in the first bucket than ink in the second bucket.
111. 26. Both A and B Alice and Bob play the following chip-off-the-table game. Given a pile of 58 chips, Alice first picks at least one chip but not all the chips. In subsequent turns, a player picks at least one chip but no more than the number picked on the previous turn by the opponent. The player to pick the last chip wins. Which of the following is true?  
 In order to win, Alice should pick 14 chips on her first turn.  
 In order to win, Alice should pick two chips on her first turn.  
 In order to win, Alice should pick one chip on her first turn.
112. 27. Both A and B Alice and Bob play the following chip-off-the-table game. Given a pile of 58 chips, Alice first picks at least one chip but not all the chips. In subsequent turns, a player picks at least one chip but no more than the number picked on the previous turn by the opponent. The player to pick the last chip wins. Which of the following is true?  
 In order to win, Alice should pick 14 chips on her first turn.  
 In order to win, Alice should pick two chips on her first turn  
 In order to win, Alice should pick one chip on her first turn.
113. 28. 30 teams enter a hockey tournament. A team is out of the tournament if it loses 2 games. What is the maximum number of games to be played to decide one winner?  
 60  
 59  
 61

30

34

114. 29. Suppose 12 monkeys take 12 minutes to eat 12 bananas. How many monkeys would it take to eat 72 bananas in 72 minutes?

6

72

12

115. 30. Alok is attending a workshop “How to do more with less” and today’s theme is Working with fewer digits . The speakers discuss how a lot of miraculous mathematics can be achieved if mankind (as well as womankind) had only worked with fewer digits. The problem posed at the end of the workshop is How many 5 digit numbers can be formed using the digits 1, 2, 3, 4, 5 (but with repetition) that are divisible by 4? Can you help Alok find the answer?

625

375

230

500

116. 31. A and B play a game of dice between them. The dice consist of colors on their faces (instead of numbers). When the dice are thrown, A wins if both show the same color; otherwise B wins. One die has 4 red face and 2 blue faces. How many red and blue faces should the other die have if the both players have the same chances of winning?

3 red and 3 blue faces

2 red and remaining blue

6 red and 0 blue

4 red and remaining blue

117. 32. A sheet of paper has statements numbered from 1 to 45. For all values of n from 1 to 45, statement n says “At most n of the statements on this sheet are false”. Which statements are true and which are false?

The odd numbered statements are true and the even numbered are false.

The even numbered statements are true and the odd numbered are false.

All statements are false.

118. 33. There are two containers A and B. A is half filled with wine whereas B which is 3 times the size of A contains one quarter portion wine. If both containers are filled with water and the contents are poured into container C, what portion of container C is wine?

.30

.31

.42

.25

Nts are true.

119. 34. A and B play a game of dice between them. The dice consist of colors on their faces (instead of numbers). When the dice are thrown, A wins if both show the same color; otherwise B wins. One die has 3 red faces and 3 blue faces. How many red and blue faces should the other die have if the both players have the same chances of winning?

5 red and 1 blue faces

1 red and 5 blue faces  
3 red and 3 blue faces

120. 35. A circular dartboard of radius 1 foot is at a distance of 20 feet from you. You throw a dart at it and it hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

(A) 0.75  
(B) 1  
(C) 0.5  
(D) 0.25

Ans: .25

Here the data about the distance is of no use.

For radius of 1 m if dart is inside the circle of 1/2 m radius the dart is closer to center than periphery so area of 1/2 m circle is  $\pi/4$  area of board is  $\pi$  So probability = 0.25

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121. **THESE ARE SOME PROBLEMS :**

1.) two pencils cost 8 cents. then 5 pencils cost? (20 cents)

122. 2. A work is done by the people in 24 minutes. One of them can do this work lonely in 40 minutes. How much time to do the same work for the second person?  
(60 minutes)

123. 3. A car is filled with four and half gallons of fuel for a round trip. Fuel is taken 1/4 more in going than coming. What is the fuel consumed in coming up? (2 gallons)

124. 4. Low temperature at the night in a city is 1/3 more than 1/2 high as higher temperature in a day. Sum of the low tem. and highest temp. is 100 degrees. Then what is the low temp? (40 deg.)

125. A person, who decided to go to weakened trip should not exceed 8 hours driving in a day. Average speed of forward journey is 40 m/h. Due to traffic in Sundays, the return journey average speed is 30 m/h. How far he can select a picnic spot?

a) 120 miles  
(B) between 120 and 140 miles  
(C) 160 miles

126. Ans: 120 miles

127. A salesperson multiplied a number and get the answer 3, instead of that number devided by 3. what is the answer he actually has to get?

$$1 \times 3 = 3$$

so number = 1

divided by 3, the ans. is 1/3.

128. A ship started from port and moving with I miles per hour and another ship started from L and moving with H miles per hour. At which place these two ships meet?  
(between I and J, nearer to J)

|---|---|---|---|---|

Port G H I J K L

129. A building with height D shadow upto G. A neighbour building with what height shadows C feet. (height = B ft)

|---|---|---|---|---|---|  
A B C D E F G H

130. A person was fined for exceeding the speed limit by 10 mph. Another person was also fined for exceeding the same speed limit by twice the same. If the second person was traveling at a speed of 35 mph, find the speed limit. (15 mph)
131. 10.A bus started from bus stand at 8.00am, and after 30 minutes staying at destination, it returned back to the bus stand. The destination is 27 miles from the bus stand. The speed of the bus is 18mph. In return journey bus travels with 50% fast speed. At what time it returns to the bus stand? (11.00am).
132. 11.In a mixture, R is 2 parts, S is 1 part. In order to make S to 25% of the mixture, how much R is to be added? ( one part of R )
133. 12. wind flows 160 miles in 330 min, for 80 miles how much time required.
134. 13. with 4/5 full tank vehicle travels 12 miles, with 1/3 full tank how much distance travels ( 5 miles )
135. 14. two trees are there. one grows at 3/5 of the other in 4 years, total growth of trees is 8 ft. what growth will smaller tree will have in 2 years (< 2 ft. )
136. 15. A storm will move with a velocity of towards the centre in hours,At the same rate how much far will it move in hrs.( but the answer is 8/3 or 2 2/3 )
137. SECTION-1 PART-3 marks-50 questions-50 30 min.
138. **CRITICAL REASONING**
1. My father has no brothers. he has three sisters who has two Childs each.  
My grandfather has sons.
139. (A) my grandfather has two sons (false)  
140. (B) three of my aunts have two sons (can't say)  
141. (C) my father is only child to his father (false)  
142. (D) i have six cousins from jmy mother side (can't say)  
143. (E) i have one uncle (false)
144. 2. Ether injected into gallbladder to dissolve galstones. this type oneday treatment is enough for gallstones not for calcium stones. this method is alternative to surgery for millions of people who are suffering from this disease.
145. (A) calcium stones can be cured in oneday (false)  
146. (B) hundreds of people contains calcium stones (can't say)  
147. (C) surgery is the only treatment to calcium stones (true)d) Ether will be injected into the gallbladder to cure the cholestrol based gall stones (true)
148. 3. Hacking is illegal entry into other computer. this is done mostly because of lack of knowledge of computer networking with networks one machine can access to another

machine. hacking go about without knowing that each network is accredited to use network facility.

149. (A) Hacking people never break the code of the company which they work for (can't say)
150. (B) Hacking is the only vulnerability of the computers for the usage of the data. (false)
151. (C) Hacking is done mostly due to the lack of computer knowledge. (false) (there will be some more questions in this one)
152. 4. Alpine tunnels are closed tunnels. in the past 30 years not even a single accident has been recorded for there is one accident in the rail road system. even in case of a fire accident it is possible to shift the passengers into adjacent wagons and even the living fire can be detected and extinguished with in the duration of 30 min.
153. (A) no accident can occur in the closed tunnels (false)
154. (B) fire is allowed to live for 30 min. (false)
155. (C) all the care that travel in the tunnels will be carried by rail shutters. (true)
156. (D)
157. 5. In the past helicopters are forced to ground or crash because of the formation of the ice on the rotors and engines. a new electronic device has been developed which can detect the watercontent in the atmosphere and warns the pilot if the temp. is below freezing temp. about the formation of the ice on the rotors and wings.
158. (A) the electronic device can avoid formation of the ice on the wings(false)
159. (B) there will be the malfunction of rotor & engine because of formation of ice (true)
160. (C) the helicopters are to be crashed or down (true)
161. (D) there is only one device that warn about the formation of ice. (true)
162. 6. In the survey conducted in mumbai out of 63 newly married house wives not a single house wife felt that the husbands should take equal part in the household work as they felt they loose their power over their husbands. inspite of their careers they opt to do the kitchen work themselves after coming back to home. the wives get half as much leisure time as the husbands get at the week ends.
163. (A) housewives want the husbands to take part equally in the household(false)
164. (B) wives have half as much leisure time as the husbands have (false)
165. (C) 39% of the men will work equally in the house in cleaning and washing (can't say)
166. (D)
167. 7. In confucius days the technology development was less and it took weeks to communicate a message. wherein we can send it through satellite with in no time...even with this fast developments it has become difficult to understand each other.

168. (A) people were not intelligent during confucius days (false)
169. (B) transport facilities are very much improved in now-a-days(true)
170. (C) even with the fast developments of the technology we cannot live happily.  
(can't say)
171. (D) we can understand the people very much with the development of communication. (false)
172. 8. Senior manager in a big company said that new japanies company invades in India for transfering the cars from industrial and warned that jobs were under threat from japanies company. They stated that increasing competence would be coupled with an inevitable down term in car market and recent rise in interest rate which has already hit demand.
173. (A) manager issue their warning after a rise in interest rate (true)
174. (B) manager told workers that Japanese workers are taking jobs away from Indian workers (false)
175. (C) manager said that more people want to buy new cars in future (false)
176. (D) increasing rate of interest mean that Japanese firm will create into operate in the country
177. Human existence is suspicious of arbitrary divide between concise and unconscious. The concise world invades shape activity of the unconscious, while many of great activity of humanity waking as whole or partially improved by dreams. Even it could be ignored that dreams precede exceptional such a dichotomy could not be drawn as the influence of dream on waking state would reamin unclear. But as yet no company rebuilt exists to record the substitute of prendtl dreaming.
178. (A) sleepy can be creative state (true)
179. (B) it is difficult to tell whether a sleeper is dream or not (true)
180. (C) if we know what babies would dream about before they are born we could show that the concise and unconscious mind influence on one another
181. (D) it is untrue claim that concise and unconscious world never impinge one another (true)
182. Any one who has has systematic exam phases will have perceived a profound although not a prolif of asymmetry whether or not the exception is volitions and self control of spontaneous appeal to predict facial as symmetry as does the type of emotion portrayed. position can not displace symmetric at left side regret of a negative emotion is more common posed expression negation emotions are likely to be symmetric representation and where as symmetric occurs relative left sided expression is more common.
183. (A) any angry person is more likely to have left sided expression than some one who has smiling (true)
184. (B) an actor is likely to smile symmetric when acting (false)

185. (C) delicious facial expression will always be as symmetrical
186. In the total Itarituran days, the words have very much devalued. In the present day, they are becoming domestic that is the words will be much more devalued. In that days, the words will be very much effected in political area. but at present, the words came very cheap, we can say they come free at cost.
187. (A) totalitarian society words are devalued (true)
188. (B) totalitarian will have to come much about words
189. (C) the art totalitarian society the words are used for the political speeches (true)
190. (D)
191. There should be copyright for all arts. the rule has come that all the arts has come under one copy right society, they were use the money that come from the arts for the developments. There may be a lot of money will come from the Tagore works. we have to ask the benifiters from Tagore work to help for the development of his works.
192. (A) Tagore works are come under this copy right rule (false)
193. (B) people gives to theater and collect the money for development (can't say)
194. (C) people are free to go to the because of the copy right rule (can't say)
195. (D) we have ask the Tagore residents to help for the developments of art. (can't say)
196. **Regarding Interview:**
197. You should say everything confidentially, whatever you say tell them frankly and confidentially i.e. I will do this, I will definitely learn within this period, now I am learning etc. regarding C-language, COBOL, etc. they will ask, how can you be best suited to our TCS (or soft ware field) ?
198. Ans: some of my seniors told that TCS is doing consultancy business in soft-ware field, this requires some sort of programming skills, knowledge of programming languages, in addition to this it requires a sort of aptitude skill which I am sure of possing it, this I can say based on my past academic achievements. Also now I am learning C, I learned up to ....(say arrays or functions) I will go through Pointers etc. also I am learning COBOL, I am preparing for TCS C, COBOL test.
199. Question: Why are you shifting from your mechanical field to software field?  
Ans: I am interested in soft-ware field, because of its bright & prosperous future and quick recognition of talent leading to faster growth.
200. They will ask about your family members and you, you just simply answer the truth frankly, they do not bouther about your father occupation i.e business studies, etc.
201. Question: how can you compete with a computer background student as you are a pure mechanical student?  
Ans: actually I have taken Fortran as one of my courses in B.Tech. degree course, now here in IIT I learned --- languages( something about what you learned in IITB), initially I found slightly difficulty to compete with a student having computers background, but

now I am confident of learning programming skills as once I am in the process of learning I am sure of achieving .

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# Campus Recruitment questions

Q1: Given a collection of points P in the plane , a 1-set is a point in P that can be separated from the rest by a line, .i.e the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The minimum value of  $n_1(P)$  over all configurations P of 5 points in the plane in general position (.i.e no three points in P lie on a line) is

- a) 3
- b) 5
- c) 2

Q2: Paul the octopus who has been forecasting the outcome of FIFA world cup matches with tremendous accuracy has now been invited to predict ICC world cup matches in 2011. We will assume that the world cup contenders have been divided into 2 groups of 9 teams each. Each team in a group plays the other teams in the group. The top two teams from each group enter the semi finals ( after which the winner is decided by knockout).

However, Paul has a soft spot for India and when India plays any team, Paul always backs India. Alas, his predictions on matches involving India are right only 2 out of 3 times. In order to qualify for the semi finals, it is sufficient for India to win 7 of its group matches. What is the probability that India will win the ICC world cup?

- a)  $(2/3)^{10}$
- b)  $(2/3)^9 + 8/3 * (2/3)^9$
- c)  $8/3 * (2/3)^9$
- d)  $(2/3)^{10} + 8/3 * (2/3)^9$

Q3: A toy train produces at least 10 different tunes when it moves around a circular toy track of radius 5 meters at 10 meters per minute. However , the toy train is defective and it now produces only two different tunes at random. What are the odds that the toy train produces 4 consecutive music tunes of the same type?

- a) 1 in 16
- b) 1 in 4
- c) 1 in 8

Q4: A number when divided by D leaves a remainder of 8 and when divided by 3D leaves a remainder of 21 . What is the remainder left, when twice the number is divided by 3D?

- a) 13
- b) cannot be determined
- c) 3
- d) 42 (solution:c)

Q5: Six friends decide to share a big cake. Since all of them like the cake, they begin quarreling who gets to first cut and have a piece of the cake. One friend suggests that they have a blindfold friend choose from well shuffled set of cards numbered one to six. You check and find that this method works as it should simulating a fair throw of a die. You check by performing multiple simultaneous trials of picking the cards blindfold and throwing a die. You note that the number shown by the method of picking up a card and throwing a real world die, sums to a number between 2 and 12. Which total would be likely to appear more often – 8,9 or 10?

- a) 8
- b) All are equally likely
- c) 9
- d) 10

Q6: One day Alice meets pal and byte in fairyland. She knows that pal lies on Mondays, Tuesdays and Wednesdays and tells the truth on the other days of the week byte, on the other hand, lies on Thursdays, Fridays and Saturdays, but tells the truth on the other days of the week. Now they make the following statements to Alice – pal. Yesterday was one of those days when I lie byte. Yesterday was one of those days when I lie too. What day is it ?

- a) Thursday
- b) Tuesday
- c) Monday
- d) Sunday (solution:a)

Q7: A car manufacturer produces only red and blue models which come out of the final testing area completely at random. What are the odds that 5 consecutive cars of the same color will come through the test area at any one time?

- a) 1 in 16
- b) 1 in 125
- c) 1 in 32
- d) 1 in 25

Q8: Alok is attending a workshop “How to do more with less” and today's theme is Working with fewer digits. The speakers discuss how a lot of miraculous mathematics can be achieved if mankind(as well as womankind) had only worked with fewer digits.

The problem posed at the end of the workshop is

How many four digit numbers can be formed using the digits 1, 2, 3, 4, 5 ( but with repetition) that are divisible by 4?

Can you help Alok find the answer?

- a) 100
- b) 125
- c) 75
- d) 85

Q9: Rearrange the following letters to make a word and choose the category in which it Ms  
RAPETEKA

- a) Bird
- b) Vegetable
- c) City
- d) Fruit

Q10: On planet korba, a solar blast has melted the ice caps on its equator. 9 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of circle, and the relationship between the diameter of this circle and the age of echina is given by the formula

$d = 4 * \sqrt{t-9}$  for  $t \geq 9$  where d represents the diameter in mm and t the number of years since the solar blast.

Jagan recorded the radius of some echina at a particular spot as 7mm. How many years back did

the solar blast occur?

- a) 17
- b) 21.25
- c) 12.25
- d) 12.06 (solution: b)

Q11: In the reading room of a library, there are 23 reading spots. Each reading spot consists of a round table with 9 chairs placed around it. There are some readers such that in each occupied reading spot there are different numbers of readers. If in all there are 36 readers, how many reading spots do not have even a single reader?

- a) 8
- b) None
- c) 16
- d) 15 (solution: d)

Q12: Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari , the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Feraari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari . It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 46 km/hr and the distance traveled by the Ferrari is 953 km, find the total time taken for Rohit to drive that distance.

- a) 20.72
- b) 5.18
- c) 238.25
- d) 6.18 (solution: b)

Q13: A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says ' At least n of the statements on this sheet are false. ' Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The odd numbered statements are true and the even numbered are false.
- c) The first 35 statements are true and the last 35 are false.
- d) The first 35 statements are false and the last 35 are true

(solution: d)

Q14: Middle – earth is a fictional land inhabited by Hobbits, Elves, dwarves and men. The Hobbits and the Elves are peaceful creatures who prefer slow, silent lives and appreciate nature and art. The dwarves and the men engage in physical games. The game is as follows . A tournol is one where out of the two teams that play a match, the one that loses get eliminated. The matches are played in different rounds where in every round , half of the teams get eliminated from the tournament. If there are 8 rounds played in a knock-out tournol how many matches were played?

- a) 257
- b) 256
- c) 72
- d) 255 (solution:d)

**Q15:** A research lab in Chennai requires 100 mice and 75 sterilized cages for a certain set of laboratory experiments . To identify the mice, the lab has prepared labels with numbers 1 to 100 , by combining tags numbered 0 to 9. The SPCA requires that the tags be made of toxin-free material and that the temperature of the cages be maintained at 27 degree Celsius. Also , not more than 2 mice can be caged together and each cage must be at least 2 sq.ft in area. The 5 experiments to be conducted by lab are to be thoroughly documented and performed only after a round of approval by authorities. The approval procedure takes around 48 hours. How many times is the tag numbered '4' used by the lab in numbering these mice?

- a) 9
- b) 19
- c) 20
- d) 21 (solution:b)

**Q16:** There are two water tanks A and B, A is much smaller than B. While water fills at the rate of one litre every hour in A, it gets filled up like 10, 20, 40, 80, 160... in tank B.( At the end of first hour, B has 10 litres , second hour it has 20, and so on). If tank B is  $\frac{1}{32}$  filled after 21 hours, what is the total duration required to fill it completely?

- a) 26 hrs
- b) 25 hrs
- c) 5 hrs
- d) 27 hrs (solution:a)

**Q17:** Consider two tumblers, the first containing one litre of coffee. Suppose you take one spoon of water out of the first tumbler and pour it into the second tumbler. After moving you take one spoon of the mixture from the second tumbler and pour it back into the first tumbler . Which one of the following statement holds now?

- a) There is less coffee in the first tumbler than water in the second tumbler.
- b) There is more coffee in the firs tumbler than water in the second tumbler
- c) There is as much coffee in the first tumbler as there is water in the second tumbler
- d) None of the statements holds true.

**Q18:** Francois Pachet , a researcher at Sony Computer Science laboratories is also a jazz musician. He decided to build a robot able to improvise like a pro. Named Continuator, the robot can duet with a live musician in real- time. It listens to a musical phrase and then computes a complementary phrase with the same playing style. If the cost of making the robot is divided between and then computes a complementary phrase with the same playing style. If the cost of making the robot is divided between materials , labour and overheads in the ratio of 4:6:2.If the materials cost \$108. the cost of the robot is

- a) \$270
- b) \$324
- c) \$216
- d) \$ 648 (solution:b)

**Q19:** A lady has fine gloves and hats in her closet- 18 blue- 32 red and 25 yellow. The lights are out and it is totally dark inspite of the darkness. She can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each colour?

- a) 50

- b) 8
- c) 60
- d) 42

Q20: A man jogs at 6 mph over a certain journey and walks over the same route at 4 mph. What is his average speed for the journey?

- a) 2.4 mph
- b) 4 mph
- c) 4.8 mph
- d) 5 mph (solution:d)

Q21: Spores of a fungus, called late blight, grow and spread infection rapidly. These pathogens were responsible for the Irish potato famine of the mid-19th century. These seem to have attacked the tomato crops in England this year. The tomato crops have reduced and the price of the crop has risen up . The price has already gone up to \$45 a box from \$27 a box a month ago. How much more would a vegetable vendor need to pay to buy 27 boxes this month over what he would have paid last month?

- a) \$27
- b) \$ 18
- c) \$45
- d) \$ 486

Q22: Given a collection of 36 points P in the plane and a point equidistant from all points in P, which of the following are necessarily true?

- A. The points in P lie on a circle.
- B. The distance between any pair of points in P is larger than the distance between X and a point in P
- a) A and B
- b) Neither A nor B
- c) B only
- d) A only

Q23: In the year 2002, Britain was reported to have had 4.3m closed – circuit television (CCTV) cameras – one for every 14 people in the country . This scrutiny is supposed to deter and detect crime. In one criminal case, the police interrogates two suspects . The ratio between the ages of the two suspects is 6:5 and the sum of their ages is 6:5 and the sum of their ages is 55 years. After how many years will the ratio be 8:7.?

- a) 11
- b) 6
- c) 10
- d) 5

Q24: Susan made a block with small cubes of 8 cubic cm volume to make a block 3 small cubes long, 9 small cubes wide and 5 small cubes deep. She realizes that she has used more small cubes than she really needed. She realized that she could have glued a fewer number of cubes together to lock like a block with same dimensions, if it were made hollow. What is the minimum number of cubes that she needs to make the block?

- a) 114
- b) 135

- c) 21
- d) 71

Q25: Alok and Bhanu play the following coins in a circle game. 99 coins are arranged in a circle with each coin touching two other coin. Two of the coins are special and the rest are ordinary. Alok starts and the players take turns removing an ordinary coin of their choice from the circle and bringing the other coins closer until they again form a (smaller) circle. The goal is to bring the special coins adjacent to each other and the first player to do so wins the game. Initially the special coins are separated by two ordinary coins O1 and O2. Which of the following is true ?

- a) In order to win, Alok should remove O1 on his first turn.
  - b) In order to win, Alok should remove one of the coins different from O1 and O2 on his first turn.
  - c) In order to win, Alok should remove O2 on his first turn.
  - d) Alok has no winning strategy.
- 



#### Job Interview, Question Placement Papers

#### Latest Sample Placement Paper Of TCS For Year-2009-10 (Mathematic, English)

1.  $(38 \times 142) \div (4096) = ?$

- 1) 337.25
- 2) 269.8
- 3) 490
- 4) 84.3125
- 5) None of these

2.  $3 + 33.3 + 3.03 + 333 = ?$

- 1) 666
- 2) 636.33
- 3) 372.33
- 4) 672.66
- 5) None of these

3.  $(17.52)^2 = ?$

- 1) 280.9504
- 2) 290.5904
- 3) 306.9504
- 4) 280.5904
- 5) None of these

4.  $(37\% \text{ of } 2370) - (41\% \text{ of } 2105) = ?$

- 1) 13.85
- 2) 12.56

- 3) 13.10
- 4) 12.15
- 5) None of these

Directions (Q. 5-14): In the following passage there are blanks, each of which has been numbered.

These numbers are printed below the passage and against each five words are suggested, one of which fits the blank appropriately. Find out the appropriate words. It is a 5 that Communists are opposed to economic reforms. The fact of the life is that Communists are the most 6 fighters for economic reforms, the reforms that lead to self-reliant and democratic economic development with social justice. To term the market-oriented changes as reform is a 7. The development strategy 8 under Structural Adjustment and dictated by the World Bank, IMF and WTO is a strategy for the 9 development of capitalism under which the working people, who are the main productive force, are made 10, kept unemployed, thrown out of jobs, and so on. It has no social relevance. In the phase of globalization, no country can develop in 11 and entry of the foreign capital can not be 12 altogether. Integration with world economy has to ensure the free and speedy 13 of the national economy. Foreign capital has to be allowed in the areas where we really need huge investment, which our resources cannot meet, and where we need technology, not available in the country. Economic 14 should not mean license for plunder by MNCs.

- 5.
  - 1) problem
  - 2) mysticism
  - 3) curiosity
  - 4) misconception
  - 5) mistake
- 6.
  - 1) liberal
  - 2) demanding
  - 3) strident
  - 4) detrimental
  - 5) horrible
- 7.
  - 1) misnomer
  - 2) terrible
  - 3) danger
  - 4) tragedy
  - 5) shame
- 8.
  - 1) reached
  - 2) verified
  - 3) assembled
  - 4) hurled
  - 5) envisaged

9.  
1) westernised  
2) unfettered  
3) gross  
4) accumulated  
5) astounding

10.  
1) labourers  
2) culprit  
3) redundant  
4) escapists  
5) icons

11.  
1) unison  
2) liberalisation  
3) coalition  
4) association  
5) isolation

12.  
1) forced  
2) loaded  
3) denied  
4) stated  
5) scrutinised

13.  
1) development  
2) empowerment  
3) unity  
4) mobilisation  
5) cohesion

14.  
1) growth  
2) potential  
3) strategy  
4) reforms  
5) vitality

Directions (Q. 15-24): Given below are two passages. Read them carefully and answer the questions given below them. Certain words are given in bold to help you to locate them while answering some of the questions.

**Passage I:** Americans have a variety of superstitions like walking under a ladder, a black cat crossing your path and the number 13, none of which seem to have a logical reason for being. However, there are no serious taboos attached to them. Individuals may have an array of sensitivities based on their personal beliefs. If you do offend someone inadvertently, a sincere

apology will usually go a long way toward making amends. The one sensitivity that almost all Americans have is about slights to their country. Either complaining about the US or expressing an attitude that your culture is superior can cause Americans to take offence. Americans do possess a great deal of culture arrogance, and think that their way is the only right way. They think that the US is the best place on earth, otherwise why would everybody try to get here? Whether you agree or not, remember that you are a guest in the US and it would be rude for a guest to insult his host

15. Which of the following can be presumed about Americans regarding superstition?

- 1) It is a cultural custom for them to believe in superstitions.
- 2) They can satisfy you by placing arguments about the validity of superstitions.
- 3) Americans cannot justify their adherence to superstitions.
- 4) Americans are highly superstitious people.
- 5) None of these

16. If you offend an American inadvertently, a sincere apology will

- 1) take a long time to repair the damage.
- 2) not necessarily be enough to amend it.
- 3) be turned down.
- 4) succeed in making amends.
- 5) None of these

17. Americans feel usually offended whenever there is a(n)

- 1) argument posed before them.
- 2) rude remark against their culture.
- 3) threat to their sovereignty.
- 4) attack on their religion.
- 5) None of these

18. What makes the Americans feel that their country is the best in the world?

- 1) mad rush of people from other countries to America
- 2) the best facilities available there
- 3) their culture and custom which they feel is the best in the world
- 4) the economic superiority of America
- 5) None of these

19. What is the antonym of the word inadvertently as given in bold in the passage?

- 1) intentionally
- 2) occasionally
- 3) unwittingly
- 4) avowedly
- 5) adroitly

**Passage II:** Population is one resource that never depletes and is a living development parameter. But it is at times interpreted as a hindering factor for development. This happens because population is both a consumer and producer. There are two schools of thought. One which treats population as a resource, and the other as a burden to the society. The truth, in fact, lies somewhere in between. The interplay of factors responsible for population growth and those for development decide the resourcefulness of population.

20. Why is it said that population is one resource that never depletes?

- 1) because other resources deplete
- 2) because population is an ever-increasing phenomenon
- 3) because population is seen as a resource
- 4) because it is an easily available commodity
- 5) None of these

21. Why population is at the same time treated as a resource and also as a burden to the society?

- 1) because population is the creator and at the same time it is also the user
- 2) because a less number of people are engaged in production and a large number of people are dependent on it
- 3) because population is not always a producer but it is always a consumer
- 4) when the growth of population is checked it is a resource and when it increases rapidly it is burden to the society
- 5) None of these

22. The resourcefulness of population can be decided by

- (i) skilled manpower
  - (ii) scale of development
  - (iii) population control measures
  - (iv) scale of population growth
- 1) All of the above
  - 2) Only (i), (ii) and (iii)
  - 3) Only (i) and (iii)
  - 4) Only (ii) and (iv)
  - 5) None of these

23. Which of the following is true in context of the passage?

- 1) It is not necessary that the population always grows.
- 2) Population is burdensome.
- 3) Most of the natural resources are exhaustible.
- 4) Population is a big consumer and a meager producer.
- 5) None of these

24. What will be the synonym of the word depletes as given in bold in the passage?

- 1) disappears
- 2) sustains
- 3) worsens
- 4) evades
- 5) reduces

25.  $- 65 \times 39 + 335 = ?$

- 1) - 849225
- 2) - 2200
- 3) - 2870
- 4) 2870
- 5) None of these

## **ANSWERS**

: 1. (1) 2. (3) 3. (3) 4. (1) 5. (4) 6. (3) 7. (1) 8. (5) 9. (2) 10. (3) 11. (5) 12. (3) 13. (1) 14. (4) 15. (3) 16. (4) 17. (2) 18. (1) 19. (1) 20.(2) 21. (1) 22. (3) 23. (3) 24. (5) 25.(2)

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Time : 80 Minutes

There was 35 Simple Aptitude Questions (but lengthy) with Negative Marking (1 Mark For 3 Wrong Answers) You have to attempt 35 question in 80 minute.

In the aptitude test each & every question in the aptitude test was from previous paper as per the new pattern. I attempt 30 uestions which was correct. You can get through if you prepared with previous papers and having a little presence of mind. I m giving u the questions with solution of some of them.

1. (1/2) of a number is 3 more than the (1/6) of the same number?

- a) 6
- b) 7
- c) 8
- d) 9

Solution:

Let the number be x,

$$((1/2)*x)=3+(1/6)*x,$$

Then solve x

2. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160 in tank B. (At the end of first hour, B has 10 liters, second hour it has 20 liters and so on). If tank B is 1/32 filled of the 21 hours, what is total duration of hours required to fill it completely?

- a) 26
- B)25
- c)5
- d)27

Solution: for every hour water in tank in B is doubled, Let the duration to fill the tank B is x hours.  $x/32$  part of water in tank of B is filled in 21 hours, Next hour it is doubled so,  $2*(x/32)$  part i.e  $(x/16)$  part is filled in 22 hours, Similarly  $(x/8)$ th part in 23 hours, $(x/4)$ th part is filled in 24 hours,  $(x/2)$ th part is filled in 25 hours,  $(x)$ th part is filled in 26 hours So answer is 26 hours.

3. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. Hence the current average age has become 45. Find the age of seventh person?

- a) 43
- b) 69
- c) 52
- d) 31

Solution:

Total age of 6 persons is x hours, after two years total age of 6 persons is  $x+12$  Average age of 6 persons is after two years is 43 So  $(x+12)/6=43$ ,then solve x,

After 7th person is added then  $(x+7\text{th person age})/7=45$  So we will get 7th person age easily

4. In the reading room of a library, there are 23 reading spots. Each reading spot consists of a round table with 9 chairs placed around it. There are some readers such that in each occupied reading spot there are different numbers of readers. If in all there are 36 readers, how many reading spots do not have even a single reader?

- a) 8
- b) none
- c) 16
- d) 15

Solution: 23 reading spots, Each reading spot consists of 9 chairs placed around it so There are some readers such that in each occupied reading spot there are different numbers of readers. For each table different no of persons are sat, so for first table 1 person is sit, 2nd table 2 persons are sit 36

readers means  $(1+2+3+4+5+6+7+8)$  so 8 tables are filled so  $23-8=15$  reading spots does not have single reader.

5. A man jogs at 6 mph over a certain journey and walks over the same route at 4 mph. What is his average speed for the journey?

- a) 2.4 mph
- b) 4.8 mph
- c) 4 mph
- d) 5 mph

Solution: Average speed =  $(2*x*y)/(x+y)$

6. Susan made a block with small cubes of 8 cubic cm volume to make a block , 3 small cubes long, 9 small cubes wide and 5 small cubes deep. She realizes that she has used more small cubes than she really needed. She realized that she could have glued a fewer number of cubes together to look like a block with same dimensions, if it were made hollow. What is the minimum number of cubes that she needs to make the block?

- a) 114
- b) 135
- c) 21
- d) 71

Solution:  $((3*9*5)) - ((3-2)*(9-2)*(5-2))$  so answer is 114.

7.  $((4x+3y)+(5x+9y))/(5x+5y) = ?$  as  $(x/2y) = 2$

- a) 8
- b) none
- c) 16
- d) 15

Solution: substitute  $x=4y$

8. A girl has to make pizza with different toppings. There are 8 different toppings. In how many ways can she make pizzas with 2 different toppings?

- a) 16
- b) 56
- c) 112
- d) 28

Solution:  $8c2$

9. A toy train produces 10 different sounds when it moves around a circular toy track of radius 5 m at 10 m per min. However, the toy train is defective and it now produces only 2 different tunes at random. What are the odds that the train produces for consecutive music tones of the same type?

- a) 1 in 16
- B) 1 in 4
- c) 1 in 8
- d) 1 in 32

Solution: Initially it produces 10 sounds and the defect came and now it produces only 2 different sounds and consecutively so there are totally 2 sounds and we have to select on sound and the probability is  $\frac{1}{2}$  and it produces the same sound consecutively for 2 times so the probability becomes  $\frac{1}{2} \times \frac{1}{2}$  ie  $\frac{1}{4}$

10. A triangle is made from a rope. The sides of the triangle are 25 cm, 11 cm and 31 cm. What will be the area of the square made from the same rope?

- a) 280.5625
- b) 240.5625
- c) 280.125
- d) 240

Solution: add all sides  $25+11+31$  to get rope length rope length = 67, rope is made into a square. So side of square is  $67/4 = 16.75$  and so area is  $16.75 \times 16.75 = 280.5625$

11. A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he travelled 1 mile in north direction & reached at North Pole. There he saw a bear. He then followed the bear around 1 hr with a speed of 2 km/hr in east direction. After that he travelled in south direction & reached at his lab in 2 hrs. Then what is the color of the bear?

- a) White
- b) Black
- c) Gray
- d) Brown

Solution is: White. above all the matter is nonsense

12. Usha bought a linen cloth and rope to build a tent. If the rope is 153 m long and it is to be cut into pieces of 1m length, then how many cuts are to be made to cut the ropes into 153 pieces?

- a) 153
- b) 152
- c) 154
- d) 155

Solution: to make it 153 pieces we have to cut 152 times so obviously after last cut we got 153rd piece

13. Spores of a fungus, called late blight, grow and spread infection rapidly. These pathogens were responsible for the Irish potato famine of the mid-19th century. These seem to have attacked the tomato crops in England this year. The tomato crops have reduced and the price of the crop has risen up. The price has already gone up to \$45 a box from \$27 a box a month ago. How much more would a vegetable vendor need to pay to buy 27 boxes this month over what he would have paid last month?

- a) \$27
- b) \$18
- c) \$45
- d) \$486

Solution: See last 3 lines only answer is  $45-27=18$

14. A Person buys a horse for 15 ponds, after one year he sells it for 20 ponds. After one year, again he buys the same horse at 30 ponds and sells it for 40 ponds. What is the profit for that person?

Solution: here we cannot consider depreciation or decay of item acc to answer

Totally  $5+10=15$ \$profit

15. John buys a cycle for 31 dollars and given a cheque of amount 35 dollars. Shop Keeper exchanged the cheque with his neighbor and gave change to John. After 2 days, it is known that cheque is bounced. Shop keeper paid the amount to his neighbor. The cost price of cycle is 19 dollars. What is the profit/loss for shop keeper?

- a) loss 23
- b) gain 23
- c) gain 54
- d) Loss 54

Solution: Loss= Change of money given to john(4\$)+actual cycle cost 19\$=23\$ loss

16. Sangakara and Ponting selects batting by using a dice, but dice is biased. So to resolve, Ponting takes out a coin. What is the probability that coin shows correct option?

- a) $\frac{1}{2}$
- b) $\frac{1}{6}$
- c) $\frac{1}{12}$
- d) $\frac{6}{10}$

Solution is  $\frac{1}{2}$ .

17. Middle- earth is a fictional land inhabited by hobbits, elves, dwarves and men. The hobbits and elves are peaceful creatures that prefer slow, silent lives and appreciate nature and art. The dwarves and the men engage in physical games. The game is as follows. A tournament is one where out of the two teams that play a match, the one that loses get eliminated. The matches are played in different rounds, where in every round; half of the teams get eliminated from the tournament. If there are 8 rounds played in knock out tournament, how many matches were played?

- a) 257
- b) 256
- c) 72
- d) 255

Solution: 28

18. There is 7 friends (A1, A2, A3....A7).If A1 have to have shake with all without repeat. How many handshakes possible?

- a) 6
- b) 21
- c) 28

d) 7

Solution-6

19. The age of the two friends were in the ration of 6:5. If the sum of their ages is 55. Then after how many years their ratio will become 8:7?

- a) 11
- b) 7
- c) 10
- d) 12

Solution:  $6x+5x=55$ , so  $x=5$ , put first ratio after substitution is  $(6*5)/(5*5)$  and second ratio is  $40/35$  So difference in numerators  $40-30=10$  years

20. A horse chases a pony 2 hours after the pony runs. Horse takes 3 hours to reach the pony. If the average speed of the horse is 81Kmph. Then what is the average speed of the pony?

- a) 46.4
- b) 51
- c) 53.4
- d) 48.6

Solution: Horse takes 3 hours to cover the distance

Pony takes  $3+2 = 5$  hours to cover the same distance, Velocity=distance/time, distance travelled by them is equal it is  $81*3=243$ km, speed of pony= $243/5=48.6$

21. Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success. Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.

- a) 20.72
- b) 3.5
- c) 238.25
- d) 6.18

Solution: Speed of Ferrari = $4*35=140$ , time=distance/velocity,  $490/140= 3.5$

22. If a and b are mixed in 3:5 ration and b and c are mixed in 8:5 ration if the final mixture is 35 liters, find the amount of b?

- A) 13.34
- b) 15.73
- c) 16.73
- d) 9.45

Solution: Solve for a:b:c, then b ratio is  $b/(a+b+c)*35$

23. my teacher says 'start' the girl who is sitting in first row and first column will say 1, then the next girl sitting behind her will say 4, the next girl sitting behind that girl will say 7, in a particular order each girl is telling a number, the following girls told 10, 13 next turn is yours what u will say?

- a) 15

- b) 17
- c) 14
- d) 16

Solution: It is a series 1, 4, 7, 10, 13.

24. A person run from A to B. He took  $\frac{1}{4}$  of the time less to reach B when compare to run at normal Speed. Then how many percentage he has increased his speed?

- a) 40
- b) 44.4
- c) 33.3
- d) 22.2

Solution: 33.33

25. In a building there are 5 rooms. Each having a equal area. The length of the room is 4m and breadht is 5 m. The height of the rooms are 2m. If 17 bricks are needed to make a square meter then how many bricks are needed to make the floor of a particular room?

- a) 320
- b) 380
- c) 340
- d) 300

Solution: area of the room is length\*breadth=4\*5=20m<sup>2</sup>, For one square meter it takes 17 bricks, For 20m<sup>2</sup> total no of bricks are 17\*20=340,

26. In a school, for a student out of 100 he got 74 of average for 7 subjects and he got 79 marks in the 8th subject. what is the average of all the subject?

- a) 76.251
- b) 80.25
- c) 74.265
- d) 74.625

Solution: Total marks=74\*7=518, then average=(518+79)/8=74.625

27. Six friends decide to share a big cake. Since all of them like the cake, they begin quarreling who gets to first cut and have a piece of the cake. One friend suggests that they have a blindfold friend choose from well shuffled set of cards numbered one to six. You check and find that this method works as it should simulating a fair throw of a die. You check by performing multiple simultaneous trials of picking the cards blindfold and throwing a die. You note that the number shown by the method of picking up a card and throwing a real world die, sums to a number between 2 and 12. Which total would be likely to appear more often – 8,9 or 10?

- a) 8
- b) All are equally likely
- c) 9
- d) 10

Solution: Calculate how many times 8,9,10 will come when we throw 2 dice, and answer

28. Hare in the other. The hare starts after the tortoise has covered  $\frac{1}{5}$  of its distance and that too leisurely. A hare and a tortoise have a race along a circle of 100 yards diameter. The tortoise goes in one direction and the hare in the other. The hare and tortoise meet when the hare has covered only  $\frac{1}{8}$  of the distance. By what factor should the hare increase its speed so as to tie the race?

a) 37.80

b) 8

c) 40

d) 5

Ans: 37.80

29. Here 10 Program , type 10 lines with in 10 minutes then 60lines can type within 60 minutes. How many programmers are needed?

a) 16

b) 6

c) 10

d) 60

Ans: 10

30. Alice and Bob play the following coins-on-a-stack game. 20 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack. Alice starts and the players take turns. A turn consists of moving the coin on the top to a position  $i$  below the top coin ( $0 = i = 20$ ). We will call this an  $i$ -move (thus a 0-move implies doing nothing). The proviso is that an  $i$ -move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coin is the third coin from the top. Then

a) In order to win, Alice's first move should be a 1-move.

b) In order to win, Alice's first move should be a 0-move.

c) In order to win, Alice's first move can be a 0-move or a 1-move.

d) Alice has no winning strategy.

Ans: d

31. For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A's chances of winning. Let's assume such rumors to be true and that in a match between Ghana and Bolivia, Ghana the stronger team has a probability of  $2/3$  of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?

a)  $1/9$

b)  $4/9$

c)  $5/9$

d)  $2/3$

Ans:  $5/9$

32. 36 people  $\{a_1, a_2, \dots, a_{36}\}$  meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs,  $\{a_1, a_2\}, \{a_2, a_3\}, \dots, \{a_{35}, a_{36}\}, \{a_{36}, a_1\}$ . Then size of the smallest set of people such that the rest have shaken hands with at least one person in the set is

a) 12

b) 11

c) 13

d)18

Ans: 18

33. A sheet of paper has statements numbered from 1 to 40. For each value of n from 1 to 40, statement n says "At least and of the statements on this sheet are true." Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The first 26 statements are false and the rest are true.
- c) The first 13 statements are true and the rest are false.
- d) The odd numbered statements are true and the even numbered are false.

Ans: c

34. There are two boxes, one containing 10 red balls and the other containing 10 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized.

This maximum probability is

- a)1/2
- b)14/19
- c)37/38
- d)3/4

Ans: 14/19

35. A and B play a game of dice between them. The dice consist of colors on their faces (instead of numbers). When the dice are thrown, A wins if both show the same color; otherwise B wins. One die has 4 red face and 2 blue faces. How many red and blue faces should the other die have if the both players have the same chances of winning?

- a) 3 red and 3 blue faces
- b) 2 red and remaining blue
- c) 6 red and 0 blue
- d) 4 red and remaining blue

Ans: a

### Second Round: Technical Interview

Time: 15 Minutes

Question of Technical Rounds

- Tell me about yourself
- Your subject of interest
- Simple program of c find the largest number
- Draw the nand gate
- Truth table of nand gate

### Third Rounds : MR

Time : 10 Minutes

IN MR round I have to take the interview of my friend After taking interview interviewer asked me will you select him or not?

#### **Fourth Round : HR**

Time : 20 Minutes

#### **Question of HR Rounds**

- Tell me about yourself
  - Why you want to join TCS?
  - U R from electrical and electronics branch then why you want to join TCS?
  - Your strength
  - AIM of your life
  - Will you able to work in night shift
  - are you ready to go in foreign countries
  - Do want to ask any question
- 

TCS Placement Paper Questions Held on 11 February 2011 JMIT, Radaur

Written Test 30 Questions

Time: 80 Minutes

1. There are two boxes, one containing 10 red balls and the other containing 10 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is

- a)3/4
- b)14/19
- c)37/38
- d)1/2

Ans.: b (probability of selecting a box=1/2.now keep 1 red ball in box a and transfer 9 red balls to b,so probability=1/2(1+9/19)

2 On the planet Oz, there are 8 days in a week- Sunday to Saturday and another day called Oz day. There are 36 hours in a day and each hour has 90 min while each minute has 60 sec. As on earth, the hour hand covers the dial twice every day.

Find the approximate angle between the hands of a clock on Oz when the time is 9:40 am.

- a. 251
- b.111
- c.29
- d.89

Ans.: c

For 12:40 am Ans.. z 89

3 Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line; i.e. the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The maximum value of  $n_1(P)$  over all configurations P of 9 points in the plane is

- a.10
- b.9

c.3

d.5

Ans.: b ( m nt sure)

4. Planet four firesides in 4-dimensional space and thus the currency used by its residents are 3-dimensional objects. The rupee notes are cubical in shape while their coins are spherical. However the coin minting machinery lays out some stipulations on the size of the coins. The diameter of the coins should be at least 64mm and not exceed 512mm.

Given a coin, the diameter of the next larger coin is at least 50% greater.

The diameter of the coin must always be an integer.

You are asked to design a set of coins of different diameters with these requirements and your goal is to design as many coins as possible. How many coins can you design?

5

9

6

8

Ans.: c(hint:first coin has length 64 mm,2nd coin diamter length  $64+(50/100)*64$ ,3rd coin 2nd coins diameter length+ $50/100$  of 2nd coinds lenght,in that way go till you reach maximum diamter length 512!now think!

5. The pacelength P is the distance between the rear of two consecutive footprints. For men, the formula,  $n/P = 144$  gives an approximate relationship between n and P where, n = number of steps per minute and P = pacelength in meters. Bernard knows his pacelength is 164cm. The formula applies to Bernard's walking. Calculate Bernard's walking speed in kmph.

23.62

11.39

8.78

236.16

Ans.:a

6. Hare in the other. The hare starts after the tortoise has covered  $1/3$  of its distance and that too leisurely. A hare and a tortoise have a race along a circle of 100 yards diameter. The tortoise goes in one direction and the hare in the other. The hare and tortoise meet when the hare has covered only  $1/5$  of the distance. By what factor should the hare increase its speed so as to tie the race?

Ans.. 4.40

7. How many 4 digit numbers can be formed using the digits 1, 2, 3, 4, 5 ( but with repetition) that are divisible by 4?

Ans..  $5^3$

8. Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari , the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Feraari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari . It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 46 km/hr and the distance traveled by the Ferrari is 953 km, find the total time taken for Rohit to drive that distance.

- a) 20.72
- b) 5.18
- c) 238.25
- d) 6.18

Ans.: (b) (time = distance/speed = 953/4 \* 46)

9. There are 6 beer bottles and one is poisoned. We have mice who will die within 14 hours after drinking poisoned beer. In 24 hours we have to find the poisoned beer bottle. How many mice do we require to find out the poisoned bottle.

options

- a) 6
- b) 4
- c) 3
- d) 1

10. keyword: Alok Bhanu, stack of 20 coins. 1 move can play. At what 1th move means to put top coin 1 position below. Gold coin. Initially gold coin is at 3rd position from top. If it's player turns and player brings gold coin to the top then player is winner. Alok starts. Which of the following is true.

- a) Alok must play 1th move to win.
- b) Alok must play 0th move to win
- c) Alok has no winning strategy

Ans. (a)

11. 1/3rd of a number is more than 3 than the 1/6th of a number then find the number?

Ans.: 18

12. After the typist writes 12 letters and addresses 12 envelopes, she inserts the letters randomly into the envelopes (1 letter per envelope). What is the probability that exactly 1 letter is inserted in an improper envelope?

- a) 0
- b) 12/212
- c) 11/12
- d) 1/12

Ans.: a (since 1 letter is in an improper envelope, the other would definitely be in an improper envelope)

13. A hollow cube of size 5 cm is taken, with a thickness of 1 cm. It is made of smaller cubes of size 1 cm. If 4 faces of the outer surface of the cube are painted, totally how many faces of the smaller cubes remain unpainted?

- 800
- 500
- 488
- 900

Ans.: side of cube = 5 cm

its thickness = 1 cm

so volume of outer cube =  $5 \times 5 \times 5$

volume of inner cube =  $3 \times 3 \times 3$

volume of the hollow cube =  $5 \times 5 \times 5 - 3 \times 3 \times 3 = 98$

so total no of small cubes of the size 1 cm =  $98/1*1*1 = 98$

we know a cube has 6 faces so total no of face =  $98*6 = 588$

one surface of outer cube contains a total of 25 surface of smaller cube , so when 4 surface of outer cube is painted total no of surface of small cubes i.e supposed to be painted is  $4*25 = 100$  so the total no of surfaces of small cube that will be remained unpainted is  $588-100 = 488$

no of faces remain unpainted:  $588-( 25* \text{no faces painted})$

14. 10 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true?

- A. All suspects are lying or the leftmost suspect is innocent.
- B. All suspects are lying and the leftmost suspect is innocent .

A only

B only

Neither A nor B

Both A and B

15. A lady has fine gloves and hats in her closet- 18 blue, 32 red, and 25 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

- a)50 b)8 c)60 d)42

Ans.:60

There can be lots of logic for this, but approach the simplest one so that we approach to one of the solutions. Suppose the lady first picks 32 Red gloves, and then 24 Yellow gloves. The next pair she picks will be one Yellow and One Blue which does not make a pair. The next two will be blue gloves. So she make a total of  $32+24+1+1+2 = 60$  picks.

16. One day Rapunzel meets Dwarf and Byte in the Forest of forgetfulness. She knows that Dwarf lies on Mondays, Tuesdays and Wednesdays, and tells the truth on the other days of the week. Byte, on the other hand, lies on Thursdays, Fridays and Saturdays, but tells the truth on the other days of the week. Now they make the following statements to Rapunzel – Dwarf:

Yesterday was one of those days when I lie. Byte: Yesterday was one of those days when I lie too. What day is it?

- (a) Thursday
- (b) Tuesday
- (c) Sunday
- (d) Monday

Ans.:

Thursday

Explanation :

On Thursday, Dwarf says truth. i.e Yesterday (Wednesday) was one of those days when I lies. Its true.

On the other hand, On Thursday, Byte lies. i.e Yesterday (Wednesday) was one of those days when I lie too. Its a lie.... So both satisfied. Hence its Thursday.

17 The citizens of planet nigiet are 5 fingered and have thus developed their decimal system in base 8.

A certain street in nigiet contains 1000 (in base 5) buildings numbered 1 to 1000.

How many 3s are used in numbering these buildings? Express result in terms of base 10.

- a) 54 b) 64 c) 75 d) 100

4. keywords: alok, bhanu, want to maximize and other want to minimize.

$$15+X^*Y-Z$$

For these type of ques, remember this thumb rule..

$$X^*Y-Z=18$$

$$X+Y-Z=11$$

$$X-Y-Z=2$$

$$\text{Ans.: } 15+18=33$$

18. The IT giant Tirnop has recently crossed a head count of 150000 and earnings of \$7 billion. As one of the forerunners in the technology front, Tirnop continues to lead the way in products and services in India. At Tirnop, all programmers are equal in every respect. They receive identical salaries Ans. also write code at the same rate. Suppose 12 such programmers take 12 minutes to write 12 lines of code in total. How long will it take 72 programmers to write 72 lines of code in total?

Ans. 12 min

$$\text{prgrmr}^*\text{min/ loc} = \text{prgmr}^*\text{min/ loc}$$

This question was also repeated thrice.

- a) no of Programmer
- b) no lines of codes
- c) how much time they will take.

19. On a sheet of paper, there are 40 statements. Each n statement states that “Atleast n number of statements on this sheet is false”. Then which of the following is true.

Ans. first 20 statements are true and last 20 are false.

This question was also repeated thrice.

- a) Atleast wid false Ans. first 20 r true and last 20 r false..
- b) Exactly wid true Ans. 39th z true nd rest r false
- c) Atmost wid true or false Ans. all statements r true

20. There are 6 circles on a diagonal of square such that their centre lie on diagonal. Consider that radius of each circle is equal. Find the ratio between side of square and radius of circle.

$$10r + 2\sqrt{2}r = \sqrt{2}a \text{ find } a/r$$

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Company Name : TCS

Type : Fresher

Job Interview, Question Paper

I am from CSE, SRKR engineering college, bhimavaram. We had campus placement drive by TCS on 19th November 2010.

Total No. of Rounds:

- Written Test
- Technical Interview
- MR
- HR

Round 1: Written Test: No Reasoning, No Verbal, Only Simple Aptitude Questions With Negative Marking (1 Mark For 3 Wrong Answers) 35 Ques-80 Minute. I heard it to be 1hr but we were facilitated with a bonus of another 20 min that day. TCS is now using a database for written tests called TOUCH STONE. It consists of around 2.5 to 3 lakh questions probably of a finite set of models. Thus the data may change but the models will be same. SO, my sincere advice is: refer the TCS old papers from this site during your preparation. And also from tcs cse strikers. com It will help you a lot. I could not remember the questions exactly but I assure you the model is the same.

Note: All the questions in the actual test will be preceded by lot of unnecessary data to confuse you. I am posting only the main part of each problem

Q.1 There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160 in tank B. (At the end of first hour, B has 10 liters, second hour it has 20 liters and so on). If tank B is  $\frac{1}{32}$  filled of the 21 hours, what is total duration of hours required to fill it completely?

- a) 26
- b) 25
- c) 5
- d) 27

Solution: for every hour water in tank in B is doubled, Let the duration to fill the tank B is x hours.  $X/32$  part of water in tank of B is filled in 21 hours, Next hour it is doubled so,  $2*(x/32)$  part i.e  $(x/16)$  part is filled in 22 hours, Similarly  $(x/8)$  th part in 23 hours,  $(x/4)$ th part is filled in 24 hours,  $(x/2)$  th part is filled in 25 hours,  $(x)$  th part is filled in 26 hours So answer is 26 hours.

Q.2: 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. Hence the current average age has become 45. Find the age of seventh person?

- a) 43
- b) 69
- c) 52
- d) 31

solution Total age of 6 persons is  $x$  hours, after two years total age of 6 persons is  $x+12$  Average age of 6 persons is after two years is 43 So  $(x+12)/6=43$ , then solve  $x$ , After 7th person is added then  $(x+7\text{th person age})/7=45$  So we will get 7th person age easily

Q.3: A man travels from A to B at 4 mph over a certain journey and returns over the same route to A, at 5 mph. What is his average speed for the journey? Solution: Average speed= $(2*x*y)/(x+y)$

Q.4: A toy train produces 10 different sounds when it moves around a circular toy track of radius 5 m at 10 m per min. However, the toy train is defective and it now produces only 2 different

tunes at random. What are the odds that the train produces for consecutive music tones of the same type?

- a) 1 in 16
- B) 1 in 4
- c) 1 in 8
- d) 1 in 32

Solution: Initially it produces 10 sounds and the defect came and now it produces only 2 different sounds and consecutively so there are totally 2 sounds and we have to select on sound and the probability is  $\frac{1}{2}$  and it produces the same sound consecutively for 2 times so the probability becomes  $\frac{1}{2} \times \frac{1}{2}$  ie  $\frac{1}{4}$

Q.5: A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he travelled 1 mile in north direction & reached at North Pole. There he saw a bear. He then followed the bear around 1 hr with a speed of 2 km/hr in east direction. After that he travelled in south direction & reached at his lab in 2 hrs. Then what is the color of the bear?

- a) White
- b) Black
- c) Gray
- d) Brown

Solution: White. all the above matter is nonsense.

Q.6: Usha bought a linen cloth and rope to build a tent. If the rope is 153 m long and it is to be cut into pieces of 1m length, then how many cuts are to be made to cut the ropes into 153 pieces?

- a) 153
- b) 152
- c) 154
- d) 155

Solution: To make it 153 pieces we have to cut 152 times so obviously after last cut we got 153rd piece

Q.7: 10 men and 10 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa?

- a) 22
- b) 20
- c) 10
- d) never

solution: NEVER

Q.8: 20 people are there, they are shaking hands together, how many hand shakes possible, if they are in no pair of cyclic sequence.

- a) 19
- b) 21
- c) 28
- d) 7

solution: answer is 19

For this type of problem answer will be  $n-1$ . but this formula will vary if cyclic sequence is allowed..

Q.9: there are some cycles and 4 wheeler cars. on tue there are 190 wheels. then how many cycles are there on that spot?

solution: check from options. multiply each and every option with 2 and subtract result from 190.if the obtained result is exactly divisible by 4, that will be the correct answer

Q.10: A father had three children. He had 7 pennies. how can he eqally distribute the fruits among his children if A watermelon costs 1 penny, 2 oranges cost 1 penny and 3 grapes cost 1 penny  
a)2 melons, 1 orange, 1 grape b) 2 melons, 2 orange, 1 grape c) 1 melons, 2 orange, 1 grape.

solution: if he buys grapes with 1 penny, he can distribute 1grape each equally as there are 3 grapes. then he has 6pennies left with him so with 3pennies he will buy 6oranges and distribute 2each. with other 3 rupees he can buy 3watermelons and distribute one each therefore, answer is:1water melon, 2 oranges and 3 grapes

Q.11: The age of the two friends were in the ration of 6:5. If the sum of their ages is 55. Then after how many years their ratio will become 8:7?

- a) 11
- b) 7
- c) 10
- d) 12

Solution:  $6x+5x=55$ , so  $x=5$ , put first ratio after substitution is  $(6*5)/(5*5)$  and second ratio is  $40/35$  So difference in numerators  $40-30=10$  years

Q.12: A horse chases a pony 2 hours after the pony runs.Horse takes 3 hours to reach the pony.If the average speed of the horse is 81Kmph.Then what is the average speed of the pony?

- a) 46.4
- b) 51
- c) 53.4
- d) 48.6

Solution: Horse takes 3 hours to cover the distance Pony takes  $3+2 =5$  hours to cover the same distance, Velocity=distance/time, distance travelled by them is equal it is  $81*3=243\text{km}$ , speed of pony= $243/5=48.6$

Q.13: All 32 points are equidistant from a point X on a plane then which is true:

- a) all 32 lie on a circle
- b) distance from X to all 32 is less than distance between each other

Solution: option a

Q.13: Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by

Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan,s old Mercedes. If the speed of Mohan,s Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.

- a) 20.72
- b) 3.5
- c) 238.25
- d) 6.18

Solution: Speed of Ferrari = $4 \times 35 = 140$ , time=distance/velocity,

Q.14 A circular dartboard of radius 1 foot is at a distance of 20 feet from you. You throw a dart at it and it hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

- a) 0.75
- b) 1
- c) 0.5
- d) 0.25

solution:

0.25

Q.15: For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A,s chances of winning. Let,s assume such rumors to be true and that in a match between Ghana and Bolivia,

Ghana the stronger team has a probability of  $\frac{2}{3}$  of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?

- a)  $\frac{4}{9}$
- b)  $\frac{2}{3}$
- c)  $\frac{1}{9}$
- d)  $\frac{5}{9}$

Answer is  $\frac{5}{9}$

Q.16 The citizens of planet nigiet are 8 fingered and have thus developed their decimal system in base 8. A certain street in nigiet contains 1000 (in base buildings numbered 1 to 1000. How many 3s are used in numbering these buildings?

- a) 256
- b) 54
- c) 192
- d) 64

Answer is 192

Q.17: 36 people {a1, a2, .., a36} meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs, {a1, a2}, {a2, a3}, {a35, a36}, {a36, a1}. Then size

of the smallest set of people such that the rest have shaken hands with at least one person in the set is

- a)12
- b)13
- c)18
- d)11

Answer is 11

Q.18 Given 3 lines in the plane such that the points of intersection form a triangle with sides of length 20, 20 and 30, the number of points equidistant from all the 3 lines is:

- a) 4
- b) 3
- c) 0
- d) 1

answer is 4

Q.19: Alok and Bhanu play the following min-max game. Given the expression  $N=9+X+Y-Z$  where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be:

- a)27
- b)18
- c)20

answer is 20

Q.20 Alice has no winning strategy. 34 people attend a party. 4 men are single and the rest are there with their wives. There are no children in the party. In all 22 women are present. Then the number of married men at the party is

- a) 12
- b) 8
- c) 16

answer is 8

Q.No:21: Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line; i.e. the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The maximum value of  $n_1(P)$  over all configurations P of 19 points in the plane is

- a)18
- b) 9
- c) 3

Q.No:22 Alice and Bob play the following chip-off-the-table game. Given a pile of 58 chips, Alice first picks at least one chip but not all the chips. In subsequent turns, a player picks at least one chip but no more than the number picked on the previous turn by the opponent. The player to

pick the last chip wins. Which of the following is true?  
In order to win, Alice should pick 14 chips on her first turn.  
In order to win, Alice should pick two chips on her first turn.  
In order to win, Alice should pick one chip on her first turn.  
I could not solve this

Q.No:23 After the typist writes 12 letters and addresses 12 envelopes, she inserts the letters randomly into the envelopes (1 letter per envelope). What is the probability that exactly 1 letter is inserted in an improper envelope?

- a) 0
- b) 12/212
- c) 11/12
- d) 1/12 (answer is 0.)

Q.No:24 10 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true? A. All suspects are lying or the leftmost suspect is innocent. B. All suspects are lying and the leftmost suspect is innocent .

- a) A only
- b) Neither A nor B
- c) Both A and B
- d) B only

(answer is A)

Q.No:25: Alchemy is an occult tradition that arose in the ancient Persian empire. Zosimos of Panopolis was an early alchemist. Zara, reads about Zosimos and decides to try some experiments. One day, she collects two buckets, the first containing one litre of ink and the second containing one litre of cola. Suppose she takes one cup of ink out of the first bucket and pours it into the second bucket. After mixing she takes one cup of the mixture from the second bucket and pours it back into the first bucket. Which one of the following statements holds now?

- a) There is more cola in the first bucket than ink in the second bucket.
- b) There is as much cola in the first bucket as there is ink in the second bucket.
- c) There is less cola in the first bucket than ink in the second bucket.

(answer is a)

Q.No:26: Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line; i.e. the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The maximum value of  $n_1(P)$  over all configurations P of 19 points in the plane is

- a) 18
- b) 9

c) 3

I colud not solve this

Q.No:27:  $(1/2)$  of a number is 3 more than the  $(1/6)$  of the same number?

- a) 6
- b) 7
- c) 8
- d) 9

Solution: Let the number be  $x$ ,  $((1/2)*x)=3+(1/6)*x$ , Then solve  $x$

Q.No:28: 3 persons a,b,c were there A always says truth,B lies on Monday, tuesday,& Wednesday.but C lies on thrusday, Friday & saturday .one day A said"that B & C said to A that" B said "yesterday way one of the days when I lies",C said that" yesterday way one of the days when I lies too".then which day was that?

- a) Sunday
- b) Thursday
- c) Saturday
- d) Tuesday

Q.No:29: Which is the smallest no which divides 2880 and gives a perfect square?

- a) 4
- b) 9
- c) 3
- d) 5

Q.No:30: 10 programmers, type 10 lines with in 10 minutes then 60lines can type within 60 minutes. How many programmers are needed?

- a) 16
- b) 6
- c) 10
- d) 60

Ans: 10

Q.No:31 to 33 2 to 3 questions of the same type above(q.29) were given like 12 monkeys eat 12 bananas in 12 min. then how many monkeys can eat 72 bananas in 72 min so on..

Guys since there is negative marking try not to make guesses. Cut off for selection may vary between 15-21 depending on your college and the situation. (It may also vary among different branches) I am not sure about the cutoff at our college but I answered 21 questions correctly and cleared the written test. One of my friends who answered only 15 questions was also selected. Getting prepared for the written test by referring all old papers of the new test pattern is more than enough to crack this test..

Round 2: Technical Interview:

In order to get through technical interview, it,s better to revise basics of all subjects. Only basic concepts will be asked. IT's HARD TO GET THROUGH THIS UNLESS WE ARE CONFIDENT ABOUT WHAT WE SPEAK. They check our attitude Even if you do not know the answer, do not get nervous. It,s a minor issue. There was one interviewer per panel. The

interviewer was very friendly. I did not feel tensed. I spoke very confidently as if I was speaking to a very familiar person With a cute smile on my face throughout the interview

Questions posed to me are:

1. Tell me about yourself?
2. Which languages are you familiar with?
3. Rate yourself for each subject.
4. What is a semaphore?
5. What is diff between CPP and Java?
6. What is static void in Java,s main statement?
7. Who will initialize the objects in Java?  
(I said wrong answer:-"compiler" but interviewer corrected it & said that the correct answer is Java Virtual Machine)
8. Some other question (I could not remember the questions)  
I do not know the answer for that and said the same to him..
9. Why TCS?
10. Given an opportunity how will you see yourself in the next 5 years?

That,s it. I was very confident about my performance and came out with a smiling face. As it was already 7.30 pm within a few minutes I was directed to M.R interview panel

Round 3: M.R

I entered the room with the same confidence. again there was only one interviewer in the panel

Me: Good Evening Sir

Interviewer: Good Evening! How was ur day today?

Me: some what uncomfortable due to the heavy rain sir...:)

I: You might be familiar with the questions being asked here. by discussing experiences from your frnds outside. u people are faster than the WWW.

Me: Yes sir (smiling)

I: so what are the questions that you gathered?

Me: why TCS? why CSE? only these two sir..every one are saying these two only!!

I: so I am not going to ask them again bcoz u might b ready with well prepared answer

Me: yes sir fine. I am ready to face any questions

I: k. good what is ur weakness?

based on my weakness sleeping I was given a situation and was asked how I will come out of that. nsvered that and I was asked to leave.

Round4: H.R: I was asked only a few questions:

- 1.Are you familiar with the TCS 2yr bond?
- 2.Willing to work any where in india?
- 3.How can u manage ur team if there are any controversies?  
(this was asked because i mentioned in resume that i can do team work efficiently)
- 4.Do you have any questions to ask?

One mistake i did in all the three interview rounds is i sat in the chair even before i was asked to sitResults were announced the next day My Name was announced first among others in our department I felt very happy to be a part of TCS. 268 from our college were selected. We

shouted to the roofs that evening. GUYS refer old papers; prepare the basic topics from each and every subject.

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Placement Paper For TCS | July 2008 ( Campus Recruitment)

1. In a class  $\frac{3}{5}$  of the students are girls and rest are boys. If  $\frac{2}{9}$  of the girls and ? of the boys are absent. What parts of the total number of students are present?

- (1)  $\frac{23}{30}$
- (2)  $\frac{23}{36}$
- (3)  $\frac{18}{49}$
- (4)  $\frac{17}{25}$

2. The maximum number of students among whom 1001 pens and 910 pencils can be distributed in such a way that each student gets same number of pens and same number of pencils. is :

- (1) 91
- (2) 910
- (3) 1001
- (4) 1911

3. Unit digit in  $(264)^{102} + (264)^{103}$  is:

- (1) 0
- (2) 4
- (3) 6
- (4) 8

4. Which one of the following is the least?

- (1)  $\frac{71}{10}$
- (2)  $\frac{4}{2}$
- (3)  $\frac{5}{4}$
- (4)  $\frac{1}{2}$

5. A person who spends  $66\frac{2}{3}\%$  of his income is able to save Rs.1, 200 per month. His monthly expenses (in Rs) is:

- (1) 1,200
- (2) 2,400
- (3) 3,300
- (4) 3,200

6. If 80% of A =50% of B and B =x% of A, then the value of x is :

- (1) 400
- (2) 300
- (3) 160
- (4) 150

7. If x is 80% of y, what percent of x is y?

- (1) 75%
- (2) 80%

- (3) 100%
- (4) 125%

8. In a town, the population was 8000. In one year, male population increased by 10% and female population increased by 8% but the total population increased by 9%. The number of males in the town was:

- (1) 4000
- (2) 4500
- (3) 5000
- (4) 6000

9. In an examination, there were 1000 boys and 800 girls. 60% of the boys and 50% of the girls passed. Find the percent of the candidates failed?

- (1) 42.6
- (2) 48.4
- (3) 44.4
- (4) 49.6

10. If A exceeds B by 40%, B is less than C by 20%, then A: C is:

- (1) 28: 25
- (2) 26: 25
- (3) 3: 2
- (4) 3: 1

11. Price of sugar rises by 20%. By how much percent should the consumption of sugar be reduced so that the expenditure does not change?

- (1) 20
- (2) 10
- (3)  $16\frac{2}{3}$
- (4) 15

12. In a school 70% of the students are girls. The number of boys are 510. Then the total number of students in the school is :

- (1) 850
- (2) 1700
- (3) 1830
- (4) 1900

13. Applied to a bill for Rs.1, 00,000 the difference between a discount of 40% and two successive discounts of 36% and 4% is :

- (1) Nil
- (2) Rs.1,440
- (3) Rs.2,500
- (4) Rs.4,000

14. A tradesman marks his goods 10% above his cost price. If he allows his customers 10% discount on the marked price, how much profit or loss does he make, if any?

- (1) 1% gain

- (2) 1% loss
- (3) 5% gain
- (4) No gain, no loss

15. A discount of 15% on one article is the same as discount of 20% on a second Article. The costs of the two articles can be :

- (1) Rs.85, Rs.60
- (2) Rs.60, Rs.40
- (3) Rs.40, Rs.20
- (4) Rs.80, Rs.60

16. An agent gets a commission of 2.5% on the sales of cloth. If on a certain day, He gets Rs.12.50 as commission, the cloth sold through him on that day is worth:

- (1) Rs.250
- (2) Rs.500
- (3) Rs.750
- (4) 1,250

17. Compound interest (compounded annually) on a certain sum of money for 2 Years at 4% per annum is Rs.102. The simple interest on the same sum for the same rate and for the same period will be :

- (1) Rs.99
- (2) Rs.101
- (3) Rs.100
- (4) 98

18. A sum of money becomes  $\frac{7}{6}$  of itself in 3 years at certain rate of simple interest. The rate per annum is :

- (1) 16%
- (2) 6 %
- (3) 18%
- (4) 25%

19. The simple interest in a certain sum at 5% per annum for 3 years and 4 years differ by Rs.42. The sum is :

- (1) Rs.210
- (2) Rs.280
- (3) Rs.750
- (4) Rs.840

20. If ' $M ? N$ ' means ' $M$  is the daughter of  $N$ ', ' $M + N$ ' means ' $M$  is the father of  $N$ ', ' $M \div N$ ' means ' $M$  is the mother of  $N$ ',

and ' $M - N$ ' means ' $M$  is the brother of  $N$ ' then in the expression ' $P \div Q + R - T ? K$ ', how ' $P$  is related to  $K$ '?

- 1) Daughter-in-law
- 2) Sister-in-law
- 3) Aunt
- 4) Mother
- 5) None of these

**1) APTITUDE TEST:**

Questions = 82 ; time limit = 90 minutes. no negative marking. Offline (paper & pen) test and a PSYCHOMETRY TEST also.

**Section 1: VERBAL ( 32 Questions ,20 minutes )**

**Directions for questions 1-10:Find the synonyms of the following words**

1. Depreciation

- A. appreciation B. Deflation C. rise D. None of these

Ans: B

2. Circumspect

- A Condition B Inspect C. Cautious D Reckless

Ans: C

3. Abysmal

- A. Slight B. Deep C. Illustrious D. Terrible

Ans: D

4. Diligent

- A. hardworking B. delinquent C. neglectful D. remiss

Ans: A

5. Vehement

- A. Passionate B. Confess C. Noisy D Moqlis

Ans: A

6. Impetus

- A. Connect B. Crucial C. Stimulus D Immediate

Ans: C

7. Acronym

- A. Abbreviation B. Similar C. analogous D. correspondent

Ans: A

8. Disseminate

- A. Forecast B. Spread C Barns D. unextended

Ans: B

9. Harbinger

- A. Naval B. Uncommon C. Fore Runner D. Glory

Ans: C

10. Ponderous

- A. light B. cumbersome C. interesting D. None of these

Ans: C

**Directions for questions 11-20:Find the Antonyms of the following words**

11) Tractable

- A. Objectionable B. Enjoyable C. Adaptable D. Obstinate

Ans: A

12) Covert

- A. Manifest B. Invisible C. Scared D. Alter

Ans: A

13) Pensive

- A. Repentant B. Sad C. Thoughtless D. Careless

Ans: C

14) Mitigate

- A. Aggravate B. Relieve C. Eliminate D. Exhume

Ans: A

15) Divergent

- A. Contrary B. Coming Together C. Conversant D. Controversy

Ans: B

16) Dogmatic

- A. Skeptical B. Resilient C. Stubborn D. Suspicious

Ans: D

17) Clutch

- A. Hold B. Grab C. Release D. Spread

Ans: C

18) Motley

- A. Bulky B. Speckled C. Homogeneous D. Different

Ans: C

19) Relinquish

- A. Pursue B. Vanquish C. Destroy D. Devastate

Ans: A

20) Transient

- (I) Permanent (Ii) Removed C. ephemeral D. passing

Ans: A

**Directions for Questions 21-26: Read the passage and answer the questions that follow on the basis of the information provided in the passage.**

Nature is like business. Business sense dictates that we guard our capital and live from the interest. Nature's capital is the enormous diversity of living things. Without it, we cannot feed ourselves, cure ourselves of illness or provide industry with the raw materials of wealth creation. Professor Edward Wilson, of Harvard University says, "The folly our descendants are least likely to forgive us is the ongoing loss of genetic and species diversity. This will take millions of years to correct".

Only 150 plant species have ever been widely cultivated. Yet over 75000 edible plants are known in the wild. In a hungry world, with a population growing by 90 million each year, so much wasted potential is tragic. Medicines from the wild are worth around 40 billion dollars a year. Over 5000 species are known to yield chemicals with cancer fighting potential. Scientists currently estimate that the total number of species in the world is between 10-30 million with only around 1.4 million identified.

The web of life is torn when mankind exploits natural resources in short-sighted ways. The trade in tropical hardwoods can destroy whole forests to extract just a few commercially attractive specimens. Bad agricultural practice triggers 24 billion tonnes of top soil erosion a year losing the equivalent of 9 million tonnes of grain output. Cutting this kind of unsuitable exploitation and instituting “sustainable utilisation” will help turn the environmental crisis around.

21. Why does the author compare ‘nature’ to business ?
- A) Because of the capital depletion in nature and business
  - B) Because of the similarity with which one should use both
  - C) Because of the same interest level yield
  - D) Because of the diversity of the various capital inputs.

Ans : B

22. “The folly our descendants are least likely to forgive us”. What is the business equivalent of the folly the author is referring to ?

- A) Reducing the profit margin
- B) Not pumping some money out of profits into the business
- C) Eroding the capital base of the business
- D) Putting interest on capital back into the business

Ans: C

23. Which of the following statements is false in context of the given passage ?

- A) The diversity of plant life is essential for human existence
- B) Scientists know the usefulness of most plant species
- C) Chemicals for cancer treatment are available from plants.
- D) There are around ten times the plant species undiscovered as compared to the discovered ones

Ans: B

24. Which of the following correctly reflects the opinion of the author to take care of hunger of the world ?

- A) Increase the number of the edible plants being cultivated.
- B) Increase cultivation of the 150 species presently under cultivation
- C) Increase the cultivation of medical plants
- D) Increase the potential of the uncultivated edible plants ?

Ans: D

25. Which of the following is mentioned as the immediate cause for the destruction of plant species ?

- A) Soil Erosion
- B) Destruction of habitat
- C) Cultivation
- D) Agricultural practices

Ans: B

26. Choose the word which is nearly same in meaning to the given word as used in the passage., Wasted

- A) Consumed
- B) Squandered
- C) Unutilized
- D) Unprofitable

Ans: C

**Directions 27-32 :** Pick out the most effective word from the given words to fill in the blank to make the sentence meaningfully complete.

27. Priya is not..... for this kind of a job

- A) cut in B) cut up C) cut through D) cut out

Ans : D

28. He left the book..... the telephone

- A) around B) beside C) besides D) at

Ans : B

29. The waiter took the plates.....after we had finished eating

- A) up B) off C) away D) out

Ans : C

30. It is fourteen years since I.....him

- A) saw B) have seen C) did see D) had seen

Ans : A

31. I have done my muddled but.....honest best

- A) never the less B) rather C) none of these

Ans : C

32. It is mainly due to their lethargy that the plan fell.....

- A) over B) out C) through D) off

Ans : C

## Section 2: QUANTITATIVE/LOGICAL REASONING ( 38 questions , 40 minutes )

1. There are 150 weights .Some are 1 kg weights and some are 2 kg weights. The sum of the weights is 260.

What is the number of 1kg weights?

Ans. 40

2. A is driving on a highway when the police fines him for over speeding and exceeding the limit by 10 km/hr. At the same time B is fined for over speeding by twice the amount by which A exceeded the limit. If he was driving at 35 km/hr what is the speed limit for the road?

Ans. 15 kmph

3. A moves 3 kms east from his starting point . He then travels 5 kms north. From that point he moves 8 kms to the east. How far is A from his starting point?

Ans. 13 kms

4. A car travels 12 kms with a 4/5th filled tank. How far will the car travel with 1/3 filled tank?

Ans. 5 kms

5. The sum of the digits of a two digit number is 8. When 18 is added to the number, the digits are reversed. Find the number?

Ans. 35

6. The cost of one pencil, two pens and four erasers is Rs.22 while the cost of five pencils, four pens and two erasers is Rs.32.How much will three pencils, three pens and three erasers cost?

Ans. 27

7. Fathers age is 5 times his son's age. 4 years back the father was 9 times older than son. Find the fathers' present age.

Ans. 40 years

8. What number should be added to or subtracted from each term of the ratio  $17 : 24$  so that it becomes equal to  $1 : 2$  ?

Ans. 10 should be subtracted

9. What is the 12th term of the series 2, 5, 8, ....

Ans. 35

10. If 20 men take 15 days to complete a job, in how many days can 25 men finish that work?

Ans. 12 days

11. In a fraction, if 1 is added to both the numerator at the denominator, the fraction becomes  $\frac{1}{2}$ . If numerator is subtracted from the denominator, the fraction becomes  $\frac{3}{4}$ . Find the fraction.

Ans.  $\frac{3}{7}$

12. If Rs.1260 is divided between between A, B and C in the ratio  $2:3:4$ , what is C's share?

Ans. Rs. 560

13. A shopkeeper bought a watch for Rs.400 and sold it for Rs.500.What is his profit percentage?

Ans. 25%

14. What percent of 60 is 12?

Ans. 20%

15. Hansie made the following amounts in seven games of cricket in India: Rs.10, Rs.15, Rs.21, Rs.12, Rs.18, Rs.19 and Rs.17(all figures in crores of course).Find his average earnings.

Ans. Rs.16 crore

16. If two pencils cost 8 cents, then how much do 5 pencils cost?

Ans. 20 cents

17. Some work is done by two people in 24 minutes. One of them can do this work alone in 40 minutes. How much time does the second person take to do the same work ?

Ans. 60 minutes

18. A car is filled with four and half gallons of fuel for a round trip.If the amount of fuel taken while going is  $\frac{1}{4}$  more than the amount taken for coming, what is the amount of fuel consumed while coming back?

Ans.2 gallons

19. The lowest temperature in the night in a city A is  $\frac{1}{3}$  more than  $\frac{1}{2}$  the highest during the day. Sum of the lowest temperature and the highest temperature is 100 degrees. Then what is the low temp?

Ans.40 degrees

20. Javagal, who decided to go to weekened trip should not exceed 8 hours driving in a day. The average speed of forward journey is 40 miles/hr.Due to traffic on sundays, the return journey's average speed is 30 m/h. How far he can select a picnic spot?

Ans. 120 miles

21. A salesperson by mistake multiplied a number and got the answer as 3, instead of dividing the number by 3. What is the answer he should have actually got?

Ans. 3

22. A building with height D shadow upto G. What is the height of a neighbouring building with a shadow of C feet.

Ans.  $(C*D)/G$

23. A person was fined for exceeding the speed limit by 10 mph. Another person was also fined for exceeding the same speed limit by twice the same. If the second person was travelling at a speed of 35 mph, find the speed limit.

Ans. 15 mph

24 A bus started from bus stand at 8.00am, and after staying for 30 minutes at a destination, it returned back to the bus stand. The destination is 27 miles from the bus stand. The speed of the bus is 18mph. During the return journey bus travels with 50% faster speed. At what time does it return to the bus stand?

Ans. 11.00am

25. In a mixture, R is 2 parts and S is 1 part. In order to make S to 25% of the mixture, how much of R is to be added?

Ans. One part of R

26. Wind flows 160 miles in 330 min, for travelling 80 miles how much time does it require?

Ans. 2 hrs 45 mins

27. With a 4/5 full tank a vehicle can travel 12 miles, how far can it travel with a 1/3 full tank

Ans. 5 miles

28. There are two trees in a lawn. One grows at a rate  $3/5$  of the other in 4 years. If the total growth of trees is 8 ft. What is the height of the smaller tree after 2 years

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29. Refer to the figure below. A ship started from P and moves at a speed of I miles per hour and another ship starts from L and moving with H miles per hour simultaneously .Where do the two ships meet?

||—g—||—h—||—i—||—j—||—k—||—l—||

PG H I J K L are the various stops in between denoted by || . The values g, h, i, j, k, l denote the distance between the ports.

Ans. Between I and J, closer to J

30. If A is travelling at 72 km per hour on a highway. B is travelling at a speed of 25 meters per second on a highway. What is the difference in their speeds in m/sec.

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31. If the word ‘ddosszm’ is changed to ‘central’ then what will be the change for ‘rttbl’ ?

Ans:quick

32. The word unimpressive was given.they asked us to do change 1st & 2nd,3rd & 4th,so on.then they asked what will be 10th letter from right?

Ans: m

33. The ques on a man,a woman and a boy finish work together in 6 days.man takes 10 days,woman takes 24 days then how much boy will take?

Ans:40 days

34. If DDMIUQZM is coded as CENTRAL then RBDJK can be coded as \_\_\_\_\_

Ans. QCEIL

35. In the word ECONOMETRICS, if the first and second , third and forth ,forth and fifth, fifth and sixth words are interchanged up to the last letter, what would be the tenth letter from right?  
Ans. word is CENOMOTEIRSC tenth word is R

36. Find the physical quantity in units from the equation: (Force\*Distance)/(Velocity\*Velocity)

Ans. Ns<sup>2</sup>/m

37. Find the value of @@+25-++@16, where @ denotes “square” and + denotes “square root”.

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38. If  $f(0)=1$  and  $f(n)= f(n-1)*n$ , find the value of  $f(4)$ .

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1) APTITUDE TEST:

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**Section 2: QUANTITATIVE/LOGICAL REASONING ( 38 questions , 40 minutes )**

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What is the number of 1kg weights?

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PG H I J K L are the various stops in between denoted by || . The values g, h, i, j, k, l denote the

distance between the ports.

Ans. Between I and J, closer to J

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Ans:quick

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Ans: m

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Ans:40 days

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35. In the word ECONOMETRICS, if the first and second , third and forth ,forth and fifth, fifth and sixth words are interchanged up to the last letter, what would be the tenth letter from right?

Ans. word is CENOMOTEIRSC tenth word is R

36.Find the physical quantity in units from the equation: (Force\*Distance)/(Velocity\*Velocity)

Ans. Ns<sup>2</sup>/m

37. Find the value of @@+25-+@16, where @ denotes “square” and + denotes “square root”.

Ans: 621

38. If  $f(0)=1$  and  $f(n)= f(n-1)*n$ , find the value of  $f(4)$ .

Ans: 24

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TCS Latest Off Campus Placement Drive Veltech Technical University, Chennai | August 2010

First round was an Quantitative Aptitude round, where we have to answer the online questions through touch stone software developed by IIT Madras students. This database have 3 lac questions, out of 3 lac we ll prompt to 35questions and time limit is 60 mins. For every correct answer we have 1 mark and for every wrong answe 0.33 mark ll be deduced (one mark for 3 wrong answers). Questions were mainly from age, ratio proportional, speed and distance, sequence, probability, work and time, average, blood relation, area and volume and one logical question.

I dont remember all questions, but the questions was lengthy which may carry irrelevant datas for exact question.. The matter is we have to pick out the right part from question as soon as possible (15 to 20 secs), because our average time for each question is 1.5min. As for study material just use RS agarwal Quantitative aptitude book, that is enough. But you must be very much clear about the concepts behind solving problems. Sorting out different type of problems for eg. in section speed and distance, we can have relative speed problem, km/hr to m/sec conversion type problems, speed of train problems, like wise. I suggest you all to sort out these type of problems from rs agarwal and let get clear about the required datas to solve the problem. This may help you in exam to quickly understand the question (which is very much necessary for

this exam).

And another notable point is you cannot find these questions anywhere else. (nothing from any book).

Some of questions in exam, which I remember is as follows:

1. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. hence the current average age has become 45. find the age of seventh person?

Solution: Here the question appear as an easy one, but carried a lot of unwanted sentences and unwanted datas (i dint mention above) in exam which may confuse you on solving technique. Let x be current average age of first 6 persons in queue and current age of seventh person be y. Then  $6x$  will become the sum of those 6 persons age.

Now, let compute the sum of those 6 persons after two years,  $6x+12$  (as each and individual increase their age by 2). hence its average become  $(6x+12)/6 = 43$  (give in question itself).

So now we can compute x from above equation. ( $x = 41$ ,  $6x = 246$ )

Let now we compute y,  $((6x+y)/7) = 45$ , as we have value of x, compute y.

Ans: 69

2. Horse started to chase dog as it relieved stable two hrs ago. And horse started to ran with average speed 22km/hr, horse crossed 10 mts road and two small pounds with depth 3m, and it crossed two small street with 200 mts length. After traveling 6 hrs, 2hrs after sunset it got dog. compute the speed of dog?

Ans: As we have speed and travel time of horse, we can get distance travelled by it...

Hence  $d = 22*6 = 132$ km,

Exactly this 132km was travelled by dog in 8 hours (as it started two hours earlier).

Hence speed of dog =  $132/8 = 16.5$ km/hr

Ans: 16.5km/hr.

3. 3, 22 , 7, 45, 15, ? , 31

Solution: Here it appear simple, because it arranged in arranged in sequence manner, but the actual question was some what twist mentioning fibonacci series and more over question was in statements (no numbers).. hence first try to understand the question well.

here let group alternate terms 3,7,15,31 ( $3+4 = 7$ ,  $7+8 = 15$ ,  $15+16=31$ )

Similarly for second group (22,45,?) ( $22+23 = 45$ ,  $45+46 = 91$ ) hence

Ans is 91.

4. In Tnagar many buildings were under residential category. for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many time 6 will appear in building numbering?

Solution: For 1 to 10 – 1 six

2 to 20 – 1 six

Similarly upto 59 we utilise six, 5 times

from 60 to 69 (including 66) – 11 times

from 70 to 100 – 3, hence ans =  $5+11+3 = 19$

Ans:19.

5.  $((4x+3y)+(5x+9y))/(5x+5y) = ?$  as  $(x/2y) = 2$

Ans: 2 (simple algebra, I think no need of explanation)

6: If we subtract a number with y, we get 4 increase of number, once it got divided by y itself..  
Find that number??

Ans: 12 (we can easily predict from options, as we take y as 6)

7. I dont remember exactly the question, one logical problem stating the colour of beer?

Ans: white.

8. Jumbled letters, parakeet (answer)

Ans: bird (category)

9. It was a ratio proportional problem with age!!!

10. one question like.  $(209*144)^2 + (209*209)+(209*144)+(144*144) = ?$

Ans: here you can use calc, many(4 to 5) questions were depend upon calc alone.(no need problem solving technique).

11. Im only son for my parents. (some irrelevant statements in the middle to distract you). The man in picture is my father's son. (some irrelevant statements).who is he?

Ans: he himself (blood relation type of question).

As I suggestively answered these above mentioned questions, I m unable to get through the process. Then you just think off, that how far you have to prepare to crack this. Take the exam as serious one and crack the competitive world.

I hope these questions will help you to get an idea on how to crack tcs first round. My suggestion is first go through all questions and try to answer simple questions first. Its easy for everyone to answer 16 to 17 right answers, beyond 17 it is very much tough to answer. as the Cutoff in other cities like banglore and hyderabad is 18. But in Chennai, I dont think they have cut off, because I answered 21 questions with 2 doubt answers (other 19 confirmly correct). But I failed to get through this round as I got 28 pos in list. Only first 20 pos selected out of 700 (approx.) people in my batch.

As I m not very much strong on Verbal, here I got good opportunity to prove myself, as the questions only from numerical ability. So I put on my full ability to get through this online exam. But I m unable to crack, and this exam clearly showed that I m not having enough stuff to get in to an MNC. As I got extremely vexed on losing this interview, I want you people not to loose this golden opportunity, like me. please take my experience as an cracking tool for exam and try to get through this exam. For this reason alone im posting these questions.

The real matter is how far you utilise your 60 min in test. first understand question in 15 to 20 seconds, or else skip it. The real thing is each and every question is mind blogging. I wish you all the best to clear this round and also to get in India's top mnc company.

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#### TCS Latest Placement Paper at Mumbai 14th August 2010

Company Name : TCS

Type : Fresher, Job Interview

Exam/Interview Date : 14-Aug-2010

No of Rounds : Aptitude Test, Technical Round-1

Location : Mumbai

Contributor Name : Sanket

I am giving u the question patterns but the exact values within questions may be different. The written test consists of 35 questions. All questions are APTITUDE questions .No Verbal, No Passages etc. Only Aptitude.Based on blood Relations, Percentages, Profit & Loss etc.

- Time: 1 hour
- There is Negative marking: -0.33 for each wrong answer.

Timer will be displayed on the top right corner of the screen.

1. form meaningful word from given letter : ARPAEEKT and tell meaning of that word

1. THE BIRD

2. THE ANIMAL

3.

4.

ans: THE BIRD---parakeet

2. There is a lab assistant.who went 1 mile to north.1mile to

east.....killed a bear.Returned to

lab.....

..... What is the colour of the bear??

1.WHITE

2.Black

3.blue

4.

ans : WHITE

(REMEMBER THE ANS OF 1st two questions)

3. A pony ran away from stable she went to new york then went to US then to mumbai ran through grass .....Horse caught her after 4 hours.....then pony went to sky.....If speed of horse is 35kmph and he left stable 3 hrs after pony left stable then what is speed of pony?

1.

2.

3.

4.

ans

PONY ran for total 7 hrs

same dist covered by horse in 4 hrs with 35 kmph

thus dist of horse  $35 \times 4$

speed of pony--- $35 \times 4 / 7$

4. Mumbai building dept decide to give numbers to building.....1-30 numbers were given to industrial buildings...1-100 were given to res.buildings .....

.....Find how many number of 2's were used while numbering res.buildings(2 number kiti vela aala???)

1.18  
2.19  
3.20  
4.21  
ans : 19

5. find  $(31*31*31/44*44*44)*(87*87*87/56*56*56)$

- 1.
- 2.
- 3.
- 4.

USE CALC1(calculator is allowed atleast in our batch it was allowed)

6. A toy train can make 10 sounds sound changes aftr every 4 min.....

..... now train is defective and can make only 2 sounds..... find probability that same sound is repeated 3 times consecutively(1 OUT OF \_\_)?

1.16  
2.8  
3.12  
4.4

ANS:

$(1/2)*(1/2)*(1/2)=(1/8)$   
thus 1 out of 8

7. ....

..... resistance is X ohm voltage Y then wat is current

- 1.
- 2.
- 3.
- 4.

ans:  $V=IR$

8. if a prson points at a photo nd say d person in dis picture iz son of my fathers son wat iz reln

- 1.
- 2.
- 3.
- 4.

9. I have 3 grandsons..... age diff btw 2 of grandsons X yrs 1st grandson

is twice elder than younger one addition off ages of all the three is  $y$  then what is age of eldest grandson??(there is some value in X and Y)

- 1.
- 2.
- 3.
- 4.

10. Ferrari is leading car manufacturer.\*Ferrari S.p.A.\* is an Italian sports car ..... it has enjoyed great success. If Mohan's Ferrari is 3 times faster than his old MERCEDES which gave him 35 kmph if Mohan travelled 490 km in his ferrari the how much time(hours) he took??

- 1.8  
2.4  
3.7  
4.7.33  
(options may b diff)

11. lion rat stayin in jungle happily.....

Lion lies on : MON TUE WED  
RAT lies on :WED THURS SAT  
if lion says : I didnt lie yesterday  
RAT says : e1 i didnt lie yesterday  
so what day is today??

- 1.
- 2.
- 3.
- 4.

12. the ratio of current age of X and Y is 5:7,after how many years der age ratio will b 7:9?

13. Inspired by fibonacci series sanket decided to create is own series which is 1,2,3,7,7,22,15,67,... lik dis,then what no come immediately before 63?  
ans= 202

Explanation: check alternate no.1,3,7,15=====> $n^2+1$  similarly 2,7,22,67=====> $n^3+1$  so series is 1,2,3,7,7,22,15,67,31,202,63.....

14. exactly similar to above qn

15. valentine day 14 feb 2005,was celebrated by n and u on monday,he was very happy,he n she..... den day on 14 feb 2010???(similar to dis some date qn was der)

16. by using 1,2,3,4,5,how many 5 digit no. can be formed which is divisible by 4,repetition of no. is allowed??

17. the cost 1 plum is 1 cent ,2 apples is 1 cent,3 banana is 1 cent..... if rahul buys same amount of fruits for his 3 sons spending 7 cent den what amount of fruit each child will get??

Ans: 1 plum ,2 apple,1 banana

Explanation:  $7/3=2.333$  cents for each child according to ans given for d sum each child will get 1 plum ,2 apple,1 banana

18. 2880 is divided by which smallest no. so we get no. which is perfect square???

ans= 5

Explanation  $2880/5=576$

19. der r to prime no.....(with some nonsense stuff)..... den addition of two prime no is 13,n multiplication is 21,den wat r some of der squares?

Explanation :  $XY=21$  and  $X+Y=13$ ...solve using calci..ans of X & Y will b in points..den  $x^2+y^2=?$

20. smita was makin 1 design ....(again some nonsense)....size of larger cube to be made is  $5*5*5$ ..... using smaller cubes of  $1*1*1$ ....she created solid larger cube ..den she decided to make hollow cube... den hw many  $1*1*1$  cubes rqd to make hollow larger cube  
ans= 104

Explanation  $(25+25)+(15+15)+(12+12)=104$

21.  $2X/5Y=5X/3Y$ ...den wat is x/y (some easy some)

22. A pizza parlor provides pizzas...there wer 2 toppings available initially peperoni and salami... but now they,ve introduces 8 new toppings (some names) to select from..... a person wishes to buy two DIFFERENT pizzas of NEW topping....in how many ways he can do that??

ans :  $8 \times 7=56$

23. person travels to....(some nonsense stuff)....if he goes from A to B with speed of 4kmph and returns back to B with speed of 5 kmph....what is his avg. speed of journey??(values may b different)

ans: 4.44(its NOT 4.5)

Explanation :  $2PQ/(P+Q)=2*4*5/(4+5)=4.44$ kmph

24. there is a dice having value frm 1 ..6 on each face.....and a pack of cards having face card aces ..... (hugh chunk of nonsense).....when 2 dies are thrown and their scores are added then which sum will come max number of times??

1.8

2.9

3.10

4.11

Ans: 8

Explanation : 8----2,6 3,5 4,4

9----4,5 3,6

10----5,5 4,6

11---- 5,6

thus 8's probability is more

25." susha brought terilon cloth and rope to (some nonsense nw jst go to last 2 lines)....".... if rope is 153 mtr long and it is to be cut into pieces of 1 mtr long then how many times will she have to cut it?? ans : 152 times

26. (dnt remembr the xact q but procedure was somethn lyk this) .....8th year--  
1/1024,, 9th year--1/512,, 10th year--1/256 then aftr hw many years 1/32???  
ans: 13

27 (some q on this formula) $(a^3 - b^3) / (a+b) = a^2 + b^2 + ab$

28. there are 2 cans A and B one of MILK and other of Water resp. , both of same qty..... first one teaspoon of milk from A can was added to B can... then one teaspoon from B can was added to A can then whch of the folloe\wing is true..

- 1.Can A contain more milk than water in can B
- 2.Can A contain less milk than water in can B
- 3.both contain same qty of milk and water
- 4.

Ans : option--2

29. probability sum on gloves,jackets and somethn lyk that(moderate sum)

30. there are some 2 wheelers and 4 wheelers parked .....(some nonsense).....total number of wheels present is X(some value) then how many 4 wheelers wer there (i dont remembr whole sum exactly) (but it was easy ,q cud b solved by considering each and every options given as ans)

31. If a pipe can fill the tank within 6 hrs but due to leak it took 30 min more now if the tank was full hw much tym will it take to get emptyed through the leak??(i dont remembr whole sum exactly)(lil bit tricky sum)

32. Avg wt of class is X kg(some number) after adding wt of the teacher avg wt of class becomes Y kg then wat is the wt of the teacher??

imp point. jus seat nxt to any of ur smart frend cauz the entire paper is same in pattern wise i.e d qn are parajumbled but wid valus change for each qn(only values r changed bt solving techniqs remains same)

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### TCS Latest Fresher Job Interview Placement Paper, 18th September 2010, Chennai

Company Name : TCS

Type : Fresher, Job Interview

Exam/Interview Date : 18-Sep-2010

No of Rounds : Technical Round-2

Location : Chennai

Contributor Name : Jagan K

I am writing this to help all those preparing for TCS – Touchstone aptitude test. The test consists of 35 questions with no verbal ability. Many think there is no verbal but the plan of TCS is to test your verbal ability in the questions of aptitude itself. Because each of the question contains atleast 5 – 6 lines with lot of stories & irrelevant data. The actual question data will be not more than 1 line.

So only if you are good in verbal ability you can understand the question & answer. I attended online aptitude test on 18th sep on veltech Chennai.

### [Here are the questions I got.](#)

I don't remember the exact data but I give you the question model & how to solve.

Ramu & sangeetha went for biological analysis to a island which is 34km from their place. They travelled in a boat which went at a speed of 2m/s. when they are in half a distance in the boat sangeetha note there are 7 leg & 8 leg octopuses under the water. Ramu counted the total number of legs of octopuses and got 54. Sangeetha instantly said I know how many 7 leged octopuses are there under the water. They both reached the island after 20 min they left . How many seven legged octopuses does sangeetha calculate?

- 1. 4
- 2. 5
- 3. 6
- 4. 7

Ans : Total number of legs of both 7 & 8 leged octopus = 54. Find number of 7 leged octopuses

### Go from answer

$$4(7 \text{ leged octopus}) + X = 54.$$

$5(7 \text{ leged octopus}) + X = 54$ . Similarly do for all. The x you get should be exactly divisible by 8. Only one answer will satisfy the condition.

Note : you may find lot of nonsense stuff to test verbal ability. Just take required data alone.

From the next question onwards I post necessary data only.

Total number of wheels of bicycles & 4 wheeled vechicles is 38. How many bicycles are there? ( This question has more than 6 lines to test your verbal abilty)

Ans: similar to above. Go from answer

Choices from answer( 2 wheelers) + X = 38. X should be exactly divisible by 4

Jumbled sentences given APPRAKEET. What is the meaning.

PARAKEET

Ans – Bird

Logical problem asking for the colour of beer

Ans : White

There are 14 spots. Each spot has 8 seats. 28 people seated in all the spots. No similar number people sat in any spot. How many spots left with no people at all

Ans :  $1+2+3+4+5+6+7 = 28$ . So remaning 7 spots has no people at all

Can A has milk. Can b had water. A spoon of milk from can A is added to Can B. Then from the mixture same amount is taken from Can B and added to Can A.

Ans : Can A contains less item than item in Can B

There is a plane contains 32 points. All the 32 points have equal distance from point x.

Which of the following is true

A:All the 32 points lie in circle.

B:The distance from x to all 32 points is less then the distance between each other

Ans : A only

Horse ran at speed of 34kmph. Pony started after 2 hours. Horse ran for 4 hours. What is the speed of pony?

Ans:  $(34*4)/(4+2)$

A clock gives 4 ticks consequetively. After days it has become defective & gives only 2 ticks.

What is the probability that clock produces 3 ticks consequetively. 1 out of ?

Ans : 1/8

A person points to a photo and says the main in the picture is the son of my fathers son. What is the relationship between him & person in the photo?

Ans : hehimself

There is a cloth of 153 yards length. X has to cut the cloth into 153 pieces. He takes 5 seconds to cut each piece how much time he require to cut all 153 pieces?

Ans:  $152*5$

Ferrari is leading car manufacturer.\*Ferrari S.p.A.\* is an Italian sports car. it has enjoyed great success. If Mohan's Ferrari is 3 times faster than his old MERCEDES which gave him 35 kmph if Mohan travelled 490 km in his ferrari the hw much time(hours) he took??

Ans :  $490/35*3$

Jagan lies on Monday Tuesday Wednesday

Pradeep lies on Wednesday Thursday Saturday.

Jagan says I didn't lie yesterday. Pradeep also says that I didn't lie yesterday. What day is today?

Ans : Sunday

The ratio of current age of X and Y is 5:7. After how many years their age becomes 7:9?

Ans : Simple ratio

by using 1,2,3,4,5,how many 5 digit no. can be formed which is divisible by 4,repetation of no. is allowed??

Ans : 2500 (not sure)

$XY=21$  and  $X+Y=13$ .ans of X & Y will b in points..den  $x$  square+ $y$  square=??

Ans : Solve using quadratic eqn. you get x & y

Person travels from A- to b in 9km/hr, and B to A in 4 Km/hr. What is the average speed?

Ans :  $2(9*4)/9+4$

Find total cost to build a robot. The cost of spare parts used to build it is in the ratio 4:5:3.

The cost of spare parts are \$40, \$50, \$60.

Ans : simple ratio. I don't remember the question exactly but all you do is to add  $\$40 + \$50 + \$60$  to get the answer

Pizza shops make pizza of same thickness and different diameters. Cost of 8cm is 80, 12 cm is 240, 24 cm is 720. Which pizza gives best value for money?

Ans : Divide cost by cm & compare with others. Hint. Take smallest one and multiply till you get the largest pizza. Then compare both you get the answer

Avg marks of 5 sub is 61. Six sub mark is 89. What is the average after adding 6th?

Ans :  $(61*5) + 89/6$

Find number of 3's between 1 & 100?

Ans : 19

A pipe can fill a tank at the rate 1 litre/hr, the tank is  $1/32$  filled in 6 hours. After how many hours the tank is filled completely

Ans -  $1/16, 1/8, 1/4, 1/2, 1$ . After 5 hours.

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#### TCS Job Interview Placement Paper Pattern: August, 2010

Company Name: TCS

Type: Fresher, Job Interview

I am V.V.Sreekanth I have done my MCA (2007-10) from MIC College of Tech, Vijayawada. I got my TCS hall ticket on 31st of August , I reached Bangalore.

There were actually four rounds:

1. Written test
2. Technical
3. GD
4. HR

There were around 3000 students, out of which only 200 cleared the written. I was one of them.

Written test:

It was very easy exam as compared with other company written exams. Test contains 35 questions, only from quantitative, in 60 minutes. You can get through if you prepared with previous papers and having a little presence of mind. Questions which I got in exam are.

Q.1. The age of Ram and Sayam are in the ratio 5:6 and after 4 years their ratios are 7:8 then what is the present age of Sayam?

Ans. 12years (names and values may change)

Q.2. There is a toy train that can make 10 musical sounds. It makes 2 musical sounds after being defective. What is the probability that same musical sound would be produced 5 times consecutively? (1 of )?

Ans.  $1/2 * 1/2 * 1/2 * 1/2 * 1/2 = 1/32$

Q.3. Find  $(4x+2y)/ (4x-2y)$  if  $x/2y=2$

Q.4. Find average speed if a man travels at speed of 14kmph up and 26kmph down at an altitude of 200m. Formula is  $2xy/ (x+y)$

Q.5. In school there are some bicycles and 4wheeler wagons. one Tuesday there are 190 wheels in the campus. How many bicycles are there?

Ans. 15

Q.6. Six friends go to pizza corner there are 2 types of pizzas. And six different flavors are there they have to select 4 flavors from 16 flavors. In how many ways we can select?

Ans.  $16C4$

Q.7. 3, 15, x, 51, 53, 159, 161. Find X

Ans. 17

Q.8. 3 friends A, B, C went for week end party to McDonald's restaurant and there they measure there weights in some order IN 7 rounds. A B C AB BC AC ABC. Final round measure is 155 kg then find the average weight of all the 7 rounds?

Ans.  $4(155)/7=31$

Q.9. The cost of making robot is divided into cost of material, cost of repairing and cost of painting in the ratio of 5:2:3. The cost used for material is 200. Find the total cost of making the robot?

Ans. 400 (just calculate it).

Q.10. (There was a long story, I'll cut short it) There are 5 materials to make a perfume: Lilac, Balsamic, Lemon, and Woody and MI mosaic. To make a perfume that is in demand the following conditions are to be followed: Lilac and Balsamic go together. Woody and MI mosaic go together. Woody and Balsamic never go together. Lemon can be added with any material. (Actually they had also mentioned how much amount of one can be added with how much quantity of the other but that's not needed for the question.) All of the following combinations are possible to make a perfume except:

1. Balsamic and Lilac
2. Woody and Lemon
3. MI mosaic and Woody
4. MI mosaic and Lilac

Q.11. A triangle is made from a rope. The sides of the triangle are A cm, B cm and C cm (I do not remember the numerical value) What will be the area of the square made from the same rope?

Ans.  $((A+B+C)/4)^2$

Q.12. What is the distance of the z-intercept from the x-intercept in the equation  $ax+by+cz=d$  (I do not remember the values of a, b, c, d).

Ans.  $\sqrt{((d/a)^2 + (d/c)^2)}$

Q.13. A scientist in Antarctic region conducts research on bears came to know that bears changes according to the location .once he moves 1 mile towards north, then he moves 2 miles towards east, then 1 mile towards south. Now the color of bear he found will be in:

Ans. white

Q.14. Two pipes A and B fill at A certain rate B is filled at 10,20,40,80,. If 1/16 of B if filled in 17 hours what time it will take to get completely filled

Ans. 21

Q.15. There are 11 boys in a family. Youngest child is a boy. What is the probability of all are boys?

- (a) 2
- (b) 2!
- (c) 2048
- (d) 1024

Q.16. A boy bought a roll A of 56 inches wide and 141 yards long. He also bought B of 77 inches wide of length 333yards. We don't want any details of B. Some irrelevant matter. Final question is Time taken for cutting A into 1 yard piece is 2 seconds. Time taken to cut into 141 pieces of 1 yard each is?

Ans. is  $2(141) = 242$

Q.17. Person buys a horse for 15 ponds, after one year he sells it for 20 pounds. After one year, again he buys the same horse at 30 pounds and sells it for 40 pounds. What is the profit for that person?

Ans. is 15 pounds

Q.18. There are 1000 pillars for a temple. 3 friends Linda, Chelsey, Juli visited that temple. (Some unrelated stuff) Linda is taller than Chelsea and taller than 2 of 1000 pillars. Julia is shorter than Linda. Find the correct sentence?

- (a) Linda is shorter among them
- (b) Chelsea is taller than Julia
- (c) Chelsea is shorter than Julia
- (d) Cannot determine who is taller among Chelsea and Julia

Ans. (d)

Q.19. In a family there are some boys and girls. All boys told that they are having equal no of brothers and sisters and girls told that they are having twice the no. of brothers than sisters. How many boys and girls present in a family?

Ans. is 4 boys and 3 girls

Q.20. There are certain number of hats and gloves in a box. They are of 41 red, 23 green, 11 orange. Power gone. But a woman can differentiate between hats and gloves. How many draws are required to obtain a pair of each color.

Q.21. There is a die with 10 faces. It is not known that fair or not. 2 captains want to toss die for batting selection. What is the possible solution among the following?

- (a) If no. is odd it is head, if no. is even it is tail
- (b) If no. is odd it is tail, if no. is even it is head
- (c) Toss a die until all the 10 digits appear on top face. And if first no. in the sequence is odd

then consider it as tail. If it is even consider it as head.  
I didn't remember last option and I don't know answer.

Q.22. 2 years ago of A is x times that of B. 3 Years hence the age of A is  $\frac{4}{3}$  times of B. What is the present age of B in binary form?

I didn't remember the exact values of x and y. You can solve easily.

Q.23. Ram buys a cycle for 31 dollars and given a cheque of amount 35 dollars. Shop Keeper exchanged the cheque with his neighbor and gave change to Ram. After 2 days, it is known that cheque is bounced. Shop keeper paid the amount to his neighbor. The cost price of cycle is 19 dollars. What is the profit/loss for shop keeper?

Ans. is 23(cost price + change given).

Q.24. Metal strip of width 'x' cm. 2 metal strips are placed one over the other, then the combine length of 2 strips is 'y'. If 'z' strips are placed in that manner. What is the final width of that arrangement?

Ans. is  $(z-1)(y-x) + x$ .

Q.25. A game is played between 2 players and one player is declared as winner. All the winners from first round are played in second round. All the winners from second round are played in third round and so on. If 8 rounds are played to declare only one player as winner, how many players are played in first round

Ans. is 28.

Q.26. There are 3 boys A, B, C and 2 Girls D, E. D always sit right to A. Girls never sit in extreme positions and in the middle position. C always sits in the extreme positions. Who is sitting immediate right to E?

Ans. is B or C

Q.27. 49 members attended the party. In that 22 are males, 17 are females. The shake hands between males, females, male and female. Total 12 people given shake hands. How many such kinds of such shake hands are possible?

Ans. is 12C2

Q.28. Entry ticket to an exhibition ranges from 1p to 31p. You need to provide exact change at the counter. You have 31p coin. In how many parts will u divide 31p so that u will provide the exact change required and carry as less coins as possible?

- (a) 22
- (b) 31
- (c) 6
- (d) 32

Ans. is 6

Q.29. There are 2 friends Peter and Paul. Peter age is twice as old as Paul when peter was as old as Paul is now. Sum of the present ages of Peter and Paul is 35.What is the present age of Peter?  
Ans. is 20

Q.30. A lady took out jacket and gloves, which are available in blue 16, yellow 40 and red 36. Power goes off, she can distinguish between gloves and jacket but not in colors. What's the possibility their she will pick up pair of gloves of each color.

Ans. very easy..

Q.31. Two bowls are taken, one contains water and another contains tea. One spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl. Which statement will hold good for the above?

Ans. second liquid in first bowl is smaller than the first mixture in second bowl)

Q.32. Rearrange and categorize the word ‘IGTRE’?

Ans. Animal (TIGER)

Q.33. A lies on Monday, Tuesday, wed and speak truths on other days, B lies on Thurs, Fri, Sat and speaks truths on other days. One day a said I lied today and B said I too lied today. What is the day?

Q.34. One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child’s age and eldest child’s age is two times of sum of other two children. What is the age of eldest child?

Ans. 18

I attempted 28 questions exactly. Result was declared after two hours and my name was among the successful guys. Then they asked us to come on 4th Sept at 1:30 PM as it was getting late that day.

Technical:

I reached there by 11:00 on 4th . After checking our documents, we were made to sit in a room and asked to wait for the turn. My turn came around 2 pm and within an hour, result was declared and again my name was in the list.

Questions asked from me are:

Q.1. Tell me about. yourself.

Ans. I told confidently.

Q.2. Your project in detail and your role in it.

Ans. I explained my entire project with diagrams. It took almost 20 minutes. He was satisfied.

Q.3. Problems faced in project

Ans. I explained because I have done my project in South Central Railways (SCR). It was a live project done by me.

Q.4. Your favorite subjects in MCA.

Ans. Be well prepare with at least 1. I told C and Java

Q.5. Why java?

Ans. Because it is a powerful language. And I explained some oops concepts which I like the most.

Q.6. You like programming or theoretical subjects?

Ans. Be confident about this.. I told programming subjects.

Q.7. He asked me to write some code of my academic project.

Ans. I have written that and explained well. He impressed..

Q.8. Difference b/w Linux and windows?

Ans. I explained kernel and its use..

**Q.9. Which database you used in your project?**

Ans. I told oracle 10g

**Q.10. Why?**

Ans. I told that SCR has Oracle licensed version. That's why I used this...

**Q.11. Random algorithm which I used in my project**

Ans. explained confidently...

**Q.12. How to do project planning?**

Ans. I explained SDLC life cycle perfectly...

**Q.13. He also asked me to explain some new concepts that I know in C.**

Ans. Actually I have done some programs using graphics in C. So I explained them. He impressed and gave shake hand.

**Q.14. Why TCS?**

**Q.15. He asked some questions on college details etc.**

Only 100 candidates cleared the technical exam.

**GD:**

Actually GD was not an elimination round in TCS.. It was very easy. My topic was Love marriages vs. Arranged marriages. Be confident.. raise at least one best point. Then You will be selected.

**HR:**

After half an hour, I was called for HR

Me: Good evening sir.

Interviewer: Good evening, take your seat.

Me: Thank you sir. (Interviewer is looking at my resume, which i already gave to them)

Interviewer: Tell me about yourself.

Me: Told with confidence and smile on my face. (I think he was well satisfied with my answer).

Interviewer: Tell me about Your family background.

Me: Blah Blah ...

Interviewer: Tell me about your hobbies?

Me: Told as cricket and internet surfing.

Then he asked some questions about cricket. So be well prepare with your hobbies

Interviewer: Why do you want to join TCS?

Me: Told some strong points about TCS and he was impressed with my answer.

Interviewer: If you are rejected today, then what will you do?

Me: Told

Interviewer: Are you ok with TCS bond (2 years, bond break 50,000)?

Me: Yes sir I am willing to write 10 years also. Because it is TCS.. Then he smiled a lot...

Interviewer: Thank you.

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### TCS Job Interview Placement Paper Pattern: September 2010

Company Name : TCS

Type: Fresher Job Interview

TCS Recruitment process consists of four rounds:

1. Written test ( 35questions-60minutes 1/3 negative)
2. Technical round
3. Management round
4. HR.

#### **Written Test:**

It is the most important round to achieve success. In this round 35 questions with 60 minutes .The questions are very lengthy and time consuming but if you found the logic it is very simple. All most all questions are having 7 to 10 lines but the useful data is in the last two lines. And one more point is in this round there is a negative marking of 1/3. If you answered the above 20 questions you will be short listed.

The questions are like..

Q.1. The ticket for a journey is in the range of 1 to 63 paise. You have 63 paise in your pocket and so on. and the question is You have to change the money into coins and all denominations are available at final. You have to buy the ticket and you should have at least one coin? (not same figures)

Ans. 64 (Just add 1 to highest i.e. 63+1)

Q.2. The sum of two numbers is given and product is also given find the square of difference of two numbers..

Ans.  $(a-b)^2=a^2+b^2-2ab$ ..

Q.3. The dog and here are running, dog crosses the roads, rivers and different. Here start running after 2 hours of dog running, dog runs 30kmph in 6 hours then what is the average speed of here? (values are not same)

Ans.  $30 \times 6 / 4$

Q.4. In a restaurant there are different nine flavours of pizzas.....

Q.5. A length of rod is turned into triangle. The sides of a triangle are 12,16,10. if this rod is turned into square then find the area of the square?

Ans. rod length= $12+16+10=38$

length of the side is a square= $38/4$ ;

area= $(38/4) \times (38/4)$

Q.6. There are some chocolates. A woman can eat 3chocolates and a man can eat 1 chocolate and a child can eat half chocolate. then 20 chocolates is divided in...

Ans. Go through the options( 5Woman, 3man, 4children).

Q.7. A water tank is filled in the way as 256,128,64,... th parts in every hour, then in how many hours the tank will filled?

Ans. 256,128,64,32,16,8,4,2,1 ( 9 hours) values are not same..

Q.8. The age of Ram and Sayam are in the ratio 5:6 and after 4 years their ratios are 7:8 then what is the present age of Sayam?

Ans. 12years (names and values may change)

The result of written test is given with in 24 hours time and by luck I am one of the short listed candidates.. and the remaining rounds are conducted for me 2nd September.

### Technical Interview:

My interview is like..

Sir: Tell me about yourself?

Me: I answered This is best question to impress the panel. so prepare yourself.

Sir: Which project You have done in the academics?

Me: I answered my project details nearly 10mins for this answered sir was impressed.

Sir: Which platform you have developed?

Me: Java

Sir: How many marks you will give for Java?

Me: 7

Sir: He asked some questions on java like

What is the difference b/w String and StringBuffer?

What are the life cycles of servelet and Applets?

Some questions on MuktiThreading?

Sir: Sir wrote some lines of code like ..

```
String s1="abc";
```

```
String s2="abc";
```

```
String s3=new String("abc");
```

```
if(s1==s2)//what it returns wheather true or false and why?
```

```
if(s1==s3)//what it returns wheather true or false and why?
```

I answered with explanation..

Sir: What is the difference between =='operator and .equals() func?

And some questions on SQL joins like difference between right join and left join and natural join etc..

and finally he asked what is your favorite core subject?

Me: OS but he did not asked any questions on OS.

**Company Name : TCS**

**Type : Fresher, Job Interview**

Pattern 1:

1.  $(1/2)$  of a number is 3 more than the  $(1/6)$  of the same number?

- a) 6 b)7 c)8 d)9

2.  $(1/3)$  of a number is 3 more than the  $(1/6)$  of the same number?  
a) 6 b) 16 c) 18 d) 21

3.  $(1/3)$  of a number is 6 more than the  $(1/6)$  of the same number?  
a) 6 b) 18 c) 36 d) 24

4.  $(2/3)$  of a number is 4 more than the  $(1/6)$  of the same number?  
a) 6 b) 8 c) 36 d) 24

5.  $(1/3)$  of a number is 5 more than the  $(1/6)$  of the same number?  
a) 6 b) 36 c) 30 d) 72

Pattern 2:

1. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160.....in tank B. (At the end of first hour, B has 10 liters, second hour it has 20 liters and so on). If tank B is  $1/32$  filled of the 21 hours, what is total duration of hours required to fill it completely?  
a) 26 B) 25 c) 5 d) 27

2. There are two pipes A and B. If A filled 10 liters in an hour, B can fill 20 liters in same time. Likewise B can fill 10, 20, 40, 80, 160..... If B filled in  $1/16$  of a tank in 3 hours, how much time will it take to fill the tank completely?  
a) 9 B) 8 c) 7 d) 6

3. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160.....in tank B.  $1/8$  th of the tank B is filled in 22 hours. What is the time to fill the tank fully?  
a) 26 B) 25 c) 5 d) 27

4. A tank is filled with water. In first hour 10 liters, second hours 20 liters, and third hour 40 liters and so on...If time taken to fill  $\frac{1}{4}$  of the tank if 5 hours. What is the time taken to fill up the tank?

a) 5 B) 8 c) 7 d) 12.5

5. If a tank A can be filled within 10 hours and tank B can be filled  $\frac{1}{4}$  in 19 hours then, what is the time taken to fill up the tank completely?

a) 21 B) 38 c) 57 d) 76

Pattern 3:

1. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. Hence the current average age has become 45. Find the age of seventh person?  
a) 43 b) 69 c) 52 d) 31

2. In a market 4 men are standing. The average age of the four before 4years is 45, after some days one man is added and his age is 49. What is the average age of all?

a) 43 b) 45 c) 47 d) 49

3. In a shopping mall with a staff of 5 members the average age is 45 years. After 5 years a person joined them and the average age is again 45 years. What's the age of 6th person?

a) 25 b) 20 c) 45 d) 30

4. In a market 4 men are standing .The average age of the four before 2 years is 55, after some days one man is added and his age is 45. What is the average age of all?  
a) 55 b)54.5 c)54.6 d)54.7

**Pattern 4:**

1. In the reading room of a library, there are 23 reading spots. Each reading spot consists of a round table with 9 chairs placed around it. There are some readers such that in each occupied reading spot there are different numbers of readers. If in all there are 36 readers, how many reading spots do not have even a single reader?  
a)8 b)none c)16 d)15
2. In the reading room of a library, there are 10 tables, 4 chairs per table. In each table there are different numbers of people seated. How many tables will be left out without at least 1 person?  
a) 8 b)6 c)2 d)7
3. In the reading room of a library, there are 10 tables, 4 chairs per table. In each table there are different numbers of people seated. How many ways they will sit in the library so that no chair would be blank?  
a) 8 b)6 c)2 d)7

**Pattern 5:**

1. A man jogs at 6 mph over a certain journey and walks over the same route at 4 mph. What is his average speed for the journey?  
a) 2.4 mph b) 4.8 mph c) 4 mph d) 5 mph
2. A man travels from A to B at 4 mph over a certain journey and returns over the same route to A, at 5 mph. What is his average speed for the journey?  
a) 4.44 mph b) 4.8 mph c) 4.887 mph d)5 mph
3. A person is rock climbing at an altitude of 800 m. He go up by 7 mph. and come down by 9 mph. what was his average speed?  
a) 7.875 mph b) 7.125 mph c) 7mph d) 7.5 mph
4. Find average speed if a man travels at speed of 24kmph up and 36kmph down at an altitude of 200m?  
a) 28.8 mph b) 27.8 mph c) 27.5mph d) 30 mph
5. Person travels to a hill, if he goes from A to B with speed of 4kmph and returns back to B with speed of 5kmph. What is his average speed of journey?  
a) 4.5kmph b) 4.44kmph c) 9kmph d) 4.245kmph
6. A man travels from A to B at 70 mph over a certain journey and returns over the same route to A, at 80 mph. What is his average speed for the journey?  
a) 74.66 b)75 c)74.33 d)74.99
7. Find average speed if a man travels at speed of 24kmph up and 36kmph down at an altitude of 200m.  
a) 28.8 b)28 c)27 d)28.6

**Pattern 6**

1. Susan made a block with small cubes of 8 cubic cm volume to make a block ,3 small cubes

long, 9 small cubes wide and 5 small cubes deep. She realizes that she has used more small cubes than she really needed. She realized that she could have glued a fewer number of cubes together to lock like a block with same dimensions, if it were made hollow. What is the minimum number of cubes that she needs to make the block?

- a) 114 b) 135 c) 21 d) 71

2. A boy wants to make cuboids of dimension 5m, 6m and 7m from small cubes of .03 m<sup>3</sup>. Later he realized he can make same cuboids by making it hollow. Then it takes some cubes less. What is the number of the cubes to be removed?

- a) 2000 b) 5000 c) 3000 d) 7000

3. Smita was making a cube with dimensions 5\*5\*5 using 1\*1\*1 cubes. What is the number of cubes needed to make a hollow cube looking of the same shape?

- a) 98 b) 104 c) 100 d) 61

4. Leena cut small cubes of 10 cm dimension each. She joined it to make a cuboid of length 100 cm, width 50 cm and depth 50 cm. How many more cubes does she need to make a perfect cube?  
a)500 b)250 c)750 d)650

5. Leena cut small cubes of 3 cubic cm each. She joined it to make a cuboid of length 10 cm, width 3 cm and depth 3 cm. How many more cubes does she need to make a perfect cube?

- a) 910 b) 250 c) 750 d) 650

6. A lady builds 9cm length, 10cm width,3cm height box using 1 cubic cm cubes. What is the minimum number of cubes required to build the box?

- a) 730 b) 270 c) 720 d) 310

#### Pattern 8:

1.  $(40*40*40 - 31*31*31)/(40*40+40*31+31*31) = ?$

- a)8 b)9 c)71 d)51

2.  $(98*98*98 - 73*73*73)/(98*98*98 - 73*73*73) = ?$

- a).171 b).4 c).420 d).415

3.  $(209*144)^2 + (209*209)+(209*144)+(144*144) = ?$

- a)905863729 b)905368729 c)905729368 d)65

#### Pattern 9:

1.  $((4x+3y)+(5x+9y))/(5x+5y) = ?$  as  $(x/2y) = 2$

- a)8 b)none c)16 d)15

2.  $x/2y = 2a$ , then  $2x/x-2ay=?$

- a)4 b)8 c)16 d)2

3.  $3X/5Y = 5Y/3X$ ....Find the value of X/Y

- a)3/5 b)5/3 c)2/5 d)5/2

4. What is the value of  $(3X+8Y)/(X-2Y)$ , if  $X/2Y=2$

- a)8 b)none c)10 d)13

5.  $(4x+3y)+(5x+9y)/(5x+5y) = ?$  as  $(x/2y) = 2$   
a)48/5 b)46/5 c)47/5 d)49/5

6.  $((4x+2y)/(4x-2y)) = ?$  as  $(x/2y) = 2$   
a)8/7 b)9/7 c)11/7 d)6/7

Pattern 10:

1. A girl has to make pizza with different toppings. There are 8 different toppings. In how many ways can she make pizzas with 2 different toppings?  
a)16 b)56 c)112 d)28

2. A pizza shop made pizzas with many flavors. There are 10 different flavors, in that 7 flavors are taken to make pizza. In how many ways they can arrange?  
a)240 b)120 c)65 d)210

3. A pizza shop made pizzas with many flavors. There are 9 different flavors, in that 2 flavors are taken to make pizza. In how many ways they can arrange?  
a)16 b)26 c)36 d)46

Pattern 11:

1. 3, 22, 7, 45, 15, ?, 31  
a)91 b)151 c)90 d)5

2. 8 6 17 14 35 31 75 \_ 143?

3. Inspired by Fibonacci series Sangeet decided to create his own series which is 1, 2, 3, 7, 7, 22, 15, 67, 31, \_, 63?  
a)202 b)31 c)76 d)49

4. 3, 12, 7, 26, 15, ?  
a)54 b)27 c)108 d)31

5.  $1! + 2! + \dots + 50! = ?$   
a)3.1035\*10^64 b)2.1021\*10^65 c)3.1035\*10^63 d)3.1035\*10^62

6. 1, 2, 3, 6, 7, 14, \_, 32?

7. 5, 9, 12, 18, 26, 36, 47, 72, \_?  
a)75 b)135 c)100 d)55

8. 3, 15, x, 51, 53, 159, 161  
a)17 b)34 c)54 d)112

Pattern 12:

1. Simple question but big one on average age.sth like a, b, c weighted separately 1st a, b, c ,then a& b, then b &c ,then c & a at last abc, the last weight was 167,then what will be the average weight of the 7 reading?  
a)95 b)95.428 c)95.45 d)94

Pattern 13:

1. A toy train produces 10 different sounds when it moves around a circular toy track of radius 5

m at 10 m per min. However, the toy train is defective and it now produces only 2 different tunes at random. What are the odds that the train produces for consecutive music tones of the same type?

a) 1 in 16 B) 1 in 4 c) 1 in 8 d) 1 in 32

2. A car manufacturer produces only red and blue models which come out of the final testing area at random. What are the odds that five consecutive cars of same color will come through the test area at any one time?

a) 1 in 16 b) 1 in 125 c) 1 in 32 d) 1 in 25

Pattern 15:

1. A triangle is made from a rope. The sides of the triangle are 25 cm, 11 cm and 31 cm. What will be the area of the square made from the same rope?

a) 280.5625 b) 240.5625 c) 280.125 d) 240

2. A triangle is made from a rope. The sides of the triangle are 21 cm, 24 cm and 28 cm. What will be the area of the square made from the same rope?

a) 280.5625 b) 333.0625 c) 333.0125 d) 400

Pattern 16:

1. What is the distance between the z-intercept from the x-intercept in the equation  $ax+by+cz+d=0$

2. What is the distance of the z-intercept from the x-intercept in the equation  $ax+by+cz=d$  (I do not remember the values of a, b, c, d).

Pattern 17:

1. A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he travelled 1 mile in north direction & reached at North Pole. There he saw a bear. He then followed the bear around 1 hr with a speed of 2 km/hr in east direction. After that he travelled in south direction & reached at his lab in 2 hrs. Then what is the color of the bear?

a) white b) black c) gray d) brown

Pattern-18:

1. Out of 7 children the youngest is boy then find the probability that all the remaining children are boys

a) 1/64 b) 1/32 c) 1/128 d) 1/256

Pattern 19:

1. Usha bought a linen cloth and rope to build a tent. If the rope is 153 m long and it is to be cut into pieces of 1m length, then how many cuts are to be made to cut the ropes into 153 pieces?

a) 153 b) 152 c) 154 d) 155

2. A person has to make 146 pieces of a long bar. He takes 4 seconds to cut a piece. What is the total time taken by him in seconds to make 146 pieces?

a) 584 b) 580 c) 730 d) 725

3. A person has to make 141 pieces of a long bar. He takes 2 seconds to cut a piece. What is the total time taken by him in seconds to make 141 pieces?

- a)560 b)280 c)112 d)324

Pattern 20:

1. Spores of a fungus, called late blight, grow and spread infection rapidly. These pathogens were responsible for the Irish potato famine of the mid-19th century. These seem to have attacked the tomato crops in England this year. The tomato crops have reduced and the price of the crop has risen up. The price has already gone up to \$45 a box from \$27 a box a month ago. How much more would a vegetable vendor need to pay to buy 27 boxes this month over what he would have paid last month?

- a) \$27 b)\$ 18 c)\$45 d)\$ 486

Pattern 21:

1. A Person buys a horse for 15 ponds, after one year he sells it for 20 pounds. After one year, again he buys the same horse at 30 pounds and sells it for 40 pounds. What is the profit for that person?

Pattern 22:

1. John buys a cycle for 31 dollars and given a cheque of amount 35 dollars. Shop Keeper exchanged the cheque with his neighbor and gave change to John. After 2 days, it is known that cheque is bounced. Shop keeper paid the amount to his neighbor. The cost price of cycle is 19 dollars. What is the profit/loss for shop keeper?

- a)loss 23 b)gain 23 c)gain 54 d)Loss 54

Pattern 23:

1. A lady has fine gloves and hats in her closet- 18 blue, 32 red, and 25 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

- a)50 b)8 c)60 d)42

2. A lady has fine gloves and hats in her closet- 14 blue, 20 red, and 18 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

3. A lady has fine gloves and hats in her closet- 13 blue, 27 red, and 40 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

4. A lady has fine gloves and hats in her closet- 25blue, 7 red, and 9 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

5. A lady has fine gloves and hats in her closet- 26 blue, 30 red, and 56 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

Pattern 24:

1. Sangakara and Ponting selects batting by using a dice, but dice is biased. So to resolve, Ponting takes out a coin. What is the probability that coin shows correct option?  
a)1/2 b)1/6 c)1/12 d)6/10

2. There is a die with 10 faces. It is not known that fair or not. 2 captains want to toss die for batting selection. What is the possible solution among the following?

- a) If no. is odd it is head, if no. is even it is tail
- b) If no. is odd it is tail, if no. is even it is head
- c) Toss a die until all the 10 digits appear on top face. And if first no. in the sequence is odd then consider it as tail. If it is even consider it as head.

Pattern 25:

1. In a family there are some boys and girls. All boys told that they are having equal no of brothers and sisters and girls told that they are having twice the no. of brothers than sisters. How many boys and girls present in a family?

- a)4 boys and 3 girls b)3 boys and 4 girls c)2 boys and 5 girls d)5 boys and 2 girls

Pattern 26;

1. 10men and 10 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa?

- a)22 b)20 c)10 d)none

2. There are 100 men and 100 women on the dance floor. They want to dance with each other. Then which of the following statements is always true:

- a) There are 2 men who danced with equal no. of women's
- b) There are 2 women who danced with equal no. of men
- a) both a and b b)only a c)only b d)none

Pattern 27:

1. Middle- earth is a fictional land inhabited by hobbits, elves, dwarves and men. The hobbits and elves are peaceful creatures that prefer slow, silent lives and appreciate nature and art. The dwarves and the men engage in physical games. The game is as follows. A tournament is one where out of the two teams that play a match, the one that loses get eliminated. The matches are played in different rounds, where in every round; half of the teams get eliminated from the tournament. If there are 8 rounds played in knock out tournament, how many matches were played?

- a)257 b)256 c)72 d)255

2. A game is played between 2 players and one player is declared as winner. All the winners from first round are played in second round. All the winners from second round are played in third round and so on. If 8 rounds are played to declare only one player as winner, how many

players are played in first round?  
a)256 b)512 c)64 d)128

Pattern 28:

1. Metal strip of width 'x' cm. 2 metal strips are placed one over the other, then the combine length of 2 strips is 'y'. If 'z' strips are placed in that manner. What is the final width of that arrangement?
2. A, B, C, D, E are there among A, B, C are boys and D, E are girls D is to the left of A and no girl sits at the middle and at the extremes. Then what is the order of their sittings.

Pattern 29:

1. There is 7 friends (A1, A2, A3....A7).If A1 have to have shake with all without repeat. How many handshakes possible?  
a)6 b)21 c)28 d)7

2. 49 members attended the party. In that 22 are males, 17 are females. The shake hands between males, females, male and female. Total 12 people given shake hands. How many such kinds of such shake hands are possible?  
a)122 b)66 c)48 d)128

Pattern 30:

1. B is taller than j and 3 pillars. P is shorter than B and 2 pillars is j shorter/taller than P?  
a)yes b)no c)may be d)can't find
2. There are 1000 pillars for a temple. 3 friends Linda, Chelsey, Juli visited that temple. (Some unrelated stuff) Linda is taller than Chelsea and taller than 2 of 1000 pillars. Julia is shorter than Linda. Find the correct sentence?
  - a) Linda is shorter among them
  - b) Chelsea is taller than Julia
  - c) Chelsea is shorter than Julia
  - d) Cannot determine who is taller among Chelsea and Julia

Pattern-31

1. Entry ticket to an exhibition ranges from 1p to 31p. You need to provide exact change at the counter. You have 31p coin. In how many parts will u divide 31p so that u will provide the exact change required and carry as less coins as possible?  
a)4 b)5 c)6 d)7

Pattern 32

1. Peter and Paul are two friends. The sum of their ages is 35 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the present age of Peter?  
a)8 b)20 c)16 d)15

Pattern 33

1. 20 men handshake with each other without repetition. What is the total number of handshakes made?

- a)190 b)210 c)150 d)250

2.10 people are there, they are shaking hands together, how many hand shakes possible, if they are in no pair of cyclic sequence.

- a)45 b)9 c)12 d)10

#### Pattern 34

1. If there are 2 wheelers and 4 wheelers parked in a school located at the heart of the city, find the number of 4 wheelers parked there if there were 20 two wheelers parked there

- a)48 b)50 c)52 d)64

2. If there are 2 wheelers and 4 wheelers parked in a school located at the heart of the city, find the number of 4 wheelers parked there if there were 58 wheels are parked there

- a)10 b)33 c)22 d)none

#### Pattern 35

1. A man whose age is 45 yrs has 3 sons named John, Jill, jack. He went to a park weekly twice. He loves his sons very much. On a certain day he found the shop keepers selling different things. An apple cost 1penny, 2chocalate costs 1penny & 3 bananas cost 1 penny. He has bought equal number of apple, chocolate & banana for each son. If the total amount he invest is 7 penny then how many he has bought from each piece for his son?

- a)1app,1cho,1 banana b)1 app,2cho,3 banana c)1app,2cho,1banana

2. One person had three children. He had 7 pennies. Find the distribution of the fruits among the three children. A melon costs 1 penny, 2 oranges cost 1 penny and 3 grapes cost 1 penny

- a)2 melons, 1 orange, 1 grape b) 2 melons, 2 orange, 1 grape c) 1 melons, 2 orange, 1 grape.

#### PATTERN 36

1) The age of the two friends were in the ration of 6:5.If the sum of their ages is 55.Then after how many years their ratio will become 8:7?

- a)11 b)7 c)10 d)12

2)The age of the two friends were in the ration of 6:5.If the sum of their ages is 66.Then after how many years their ratio will become 7:6?

- a)11 b)6 c)10 d)12

3) The age of the two friends were in the ration of 2:3.If the sum of their ages is 55.Then after how many years their ratio will become 4:5?

- a)11 b)33 c)22 d)44

#### PATTERN 37

1)A volume of 10936 l water is in a container of sphere.How many semisphere of volume 4l each will be required to tranfer all the water into the small semispheres?

- a)2812 b)8231 c)2734 d)4222

### PATTERN 38

- 1)A person is manufacturing a house. He bought 20 ropes of wire which has a density of 300 Kg/m<sup>3</sup>. The height of the building to be constructed is 40 m. If the capacity of the current passed in the wire is 20 A and the voltage capacity is 80 Volts. Then what will be the opposing force to the current if the wire is used ?  
a)2 b)4 c)8 d)1600

### PATTERN 39

- 1)A horse chases a pony 2 hours after the pony runs. Horse takes 3 hours to reach the pony. If the average speed of the horse is 81Kmph. Then what is the average speed of the pony?  
a)46.4 b)51 c)53.4 d)48.6

2) A horse chases a pony 3 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 35 kmph, what s the average speed of the pony?

3) : A horse chases a pony 3 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 35 kmph, what s the average speed of the pony

### PATTERN 40

1)The difference between two no is 9 and the product of the two is 14.What is the square of their sum?

- a)120 b)130 c)137 d)145

2) The sum of two no is 5 and the product of the two is 14.What is the sum of their squares?

3) The sum of the squares of two no is 12 and their sum is 15.Find the product of the two no?

### PATTERN 41

1) On planet korba, a solar blast has melted the ice caps on its equator. 9 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of circle, and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4*\sqrt{(t-9)}$  for  $t \geq 9$  where d represents the diameter in mm and t the number of years since the solar blast.Jagan recorded the radius of some echina at a particular spot as 7mm. How many years back did the solar blast occur?

- a) 17 b)21.25 c)12.25 d)14.05

### PATTERN 42

1)A man goes 50Km north , then turned left walked 40Km, then turned right ? In which direction he is?

- a)North b)South c)East d)West

### PATTERN 43

1)In T.Nagar the building were numbered from 1 to 100. Then how many 4's will be present in the numbers?

- a)18 b)19 c)20 d)21

2) In T.Nagar the building were numbered from 1 to 100. Then how many 6's will be present in the numbers?

- a) 18 b) 19 c) 20 d) 21

3) In T.Nagar the building were numbered from 1 to 100. Then how many 1's will be present in the numbers?

- a) 18 b) 19 c) 20 d) 21

4) In T.Nagar the building were numbered from 1 to 100. Then how many 0's will be present in the numbers?

- a) 18 b) 19 c) 20 d) 11

#### PATTERN 44

1) A number when divided by D leaves a remainder of 8 and when divided by 3D leaves a remainder of 21. What is the remainder left, when twice the number is divided by 3D?

- 13 b) cannot be determined c) 3 d) 42

#### PATTERN 45

1.) Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.

20.72 b) 5.18 c) 238.25 d) 6.18

2) Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 46 km/hr and the distance traveled by the Ferrari is 953 km, find the total time taken for Rohit to drive that distance.

20.72 b) 5.18 c) 238.25 d) 6.18

#### PATTERN 46

1) A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says ' At least n of the statements on this sheet are false. ' Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The odd numbered statements are true and the even numbered are false.
- c) The first 35 statements are true and the last 35 are false.
- d) The first 35 statements are false and the last 35 are true.

**PATTERN 47**

- 1) A man goes north 37km.turns left goes 2km.turns right goes 17km.turns right goes 2km. find distance b/w starting ending point.  
a) 54 b) 27 c) 81 d) 67

**PATTERN 48**

- 1) If there are 30 cans out of them one is poisoned if a person tastes very little he will die within 14 hours so if there are mice to test and 24 hours to test, how many mices are required to find the poisoned can?  
a) 3 b) 2 c) 6 d) 1

**PATTERN 49**

- 1) If a and b are mixed in 3:5 ration and b and c are mixed in 8:5 ration if the final mixture is 35 liters, find the amount of b?  
A) 13.34 b) 15.73 c) 16.73 d) 9.45

**PATTERN 50**

- 1) If we subtract a number with y, we get 4 increase of number, once it got divided by y itself...  
Find that number??  
A) 13 b) 12 c) 14 d) 11

**PATTERN 51**

- 1) It is the class with the seating arrangement in 4 rows and 8 columns. When the teacher says 'start' the girl who is sitting in first row and first column will say 1, then the next girl sitting behind her will say 4, the next girl sitting behind that girl will say 7, in a particular order each girl is telling a number, the following girls told 10, 13 next turn is yours what u will say?  
a) 15 b) 17 c) 14 d) 16

**PATTERN 52**

- 1) It is dark in my bedroom and I want to get two socks of the same color from my drawer, which contains 24 red and 24 blue socks. How many socks do I have to take from the drawer to get at least two socks of the same color?  
A) 2 b) 3 c) 48 d) 25
- 2) Lady has 2 select gloves & hat from a basket. In the dark, she can distinguish hat&gloves. 14red, 20blue, 18green r there. Find probability that any selected glove pair has same color.
- 3).A lady had fine gloves and hats. 25 blue, 7 red and 9grey. She had to select a pair among them. But there was no light so she had to select in darkness the correct pair with a glove and a hat. Therefore how many combinations of same color she can select?

**PATTERN 53**

- 1) If the Valentine's Day in 2005 falls on Monday, then on which day will the Valentine's Day fall on 2010?  
A) Saturday b) Thursday c) Wednesday d) Sunday

**PATTERN 54**

1. A person run from A to B. He took  $\frac{1}{4}$  of the time less to reach B when compare to run at normal Speed. Then how many percentage he has increased his speed?  
a)40 b)44.4 c)33.3 d)22.2

2. An athlete decides to run the same distance in 1/4th less time that she usually took. By how much percent will she have to increase her average speed?  
a)40 b)44.4 c)33.3 d)22.2

#### PATTERN 55

1. In a building there are 5 rooms. Each having a equal area .The length of the room is 4m and breadht is 5 m.The height of the rooms are 2m.If 17 bricks are needed to make a square meter then how many bricks are needed to make the floor of a particular room?  
a)320 b)380 c)340 d)300

#### PATTERN 56

1. One man want to build a wall .The length and breadth of the wall are 20 and 30 respectively. He need 35 bricks for one square centimeter then how many bricks he need?  
a)21,500 b)30,000 c)21,000 d)20,000

#### PATTERN 57

1. In a hotel we can order two types of varities,but we can make 6 more variteis in home.One can choose the four varities with two from hotel as must.Find how many ways one can order.  
a)14 b)15 c)56 d)28

#### PATTERN 58

1. If a pipe can fill the tank within 6hrs.But due to leak it takes 30 min more.Now the tank is full then how much time will it take to empty the tank throught the leak.?  
a)78 b)56 c)66 d)59

#### PATTERN 59

- 1.The bacteria has the probability of split into 3 and probability to die is 1/3rd of the total bacteria.Let the probability is P.Some of them survived with probability 1/5.Then which among the following relation is true?  
a) $P=1/3+1/5*3$  b) $P=1/5*(1/8-3)$

2. There is a bacteria which has the probability of die 1/3 of its total number or it may tripled. Find out the probability

A.  $P=1/3+(2/3*p^3)$  B.  $P=2/3+(2/3*p^3)$  C.  $P=2/3+(1/3*p^3)$  D  $P=2/3+(2/3*p^3)$

#### PATTERN 60

1. There was a grand mother in a village who had a grand child.Upon asking her grand childs age she told that she is as older as many days old as her daughters age in weeks and as many days as her own age in years.The sum of the three is 130.then how old is the child.?

#### PATTERN 61

- 1) In T.Nagar the building were numbered from 1 to 100.Then how many 4's will be present in the numbers?  
a)18 b)19 c)20 d)21

2) In Tnagar many buildings were under residential category. for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many time 6 will appear in building numbering?

#### PATTERN 62

1) Amrith told to Anand in front of a Photo that “He is the son of my father’s son”. Find who is in the picture if amrith have no brothers and sisters.  
a) Amrith himself b) Amrith’s Uncle c) Amrith’s Father d) Amrith’s son

2) One person has no siblings and says,” the guy in the photo is the only son of my father ‘s son”. What is the relation of the guy to the person?

#### PATTERN 63

1) One grand father has 3 grand children two of the age difference is 3. Eldest child age is 3 times the youngest child’s age and the eldest child age is two year more than the sum of other two children. Find what is the age of the elders child?  
a) 18 b) 22 c) 30 d) 10.

2) One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child’s age and eldest child’s age is two times of sum of other two children. What is the age of eldest child?

3) One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child’s age and eldest child’s age is two times of sum of other two children. What is the age of eldest child?

#### PATTERN 64

1) In a school, for a student out of 100 he got 74 of average for 7 subjects and he got 79 marks in the 8th subject. what is the average of all the subject?  
a) 76.251 b) 80.25 c) 74.265 d) 74.625

#### PATTERN 65

1) 3 persons a,b,c were there A always says truth, B lies on Monday, tuesday, & Wednesday. but C lies on Thursday, Friday & Saturday . one day A said “that B & C said to A that” B said “yesterday way one of the days when I lies”, C said that “yesterday way one of the days when I lies too”. then which day was that?  
a) Sunday b) Thursday c) Saturday d) Tuesday

#### PATTERN 66

1) Which is the smallest no which divides 2880 and gives a perfect square?  
a) 4 b) 9 c) 3 d) 5

#### PATTERN 67

1) How many 9 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by 4 if the repetition is allowed?  
a) 57 b) 56 c) 59 d) 58

- 2) how many 13 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by 4 if repetition of digits is allowed?
- 3) By using 1,2,3,4,5,how many 5 digit no. can be formed which is divisible by 4,repetation of no. is allowed??
- 4) Form 8 digit numbers from by using 1, 2,3,4,5 with repetition is allowed and must be divisible by4?
- 5) How many of 14 digit numbers we can make with 1,2,3,4,5 that are divisible by 4. Repetitions allowed.

#### PATTERN 68

- 1) Consider two tumblers, the first containing Water and next contains coffee. Suppose you take one spoon of water out of the first tumbler and pour it into the second tumbler. After moving you take one spoon of the mixture from the second tumbler and pour it back into the first tumbler . Which one of the following statement holds now?
- a) There is less coffee in the first tumbler than water in the second tumblers
  - b) There is more coffee in the firs tumbler than water in the second tumbler
  - c) There is as much coffee in the first tumbler as there is water in the second tumbler
  - d)None of the statements holds true
- 2) Two bowls are taken, one contains water and another contains tea.one spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl. Which statement will hold good for the above?

#### PATTERN 69

- 1) Six friends decide to share a big cake. Since all of them like the cake, they begin quarreling who gets to first cut and have a piece of the cake. One friend suggests that they have a blindfold friend choose from well shuffled set of cards numbered one to six. You check and find that this method works as it should simulating a fair throw of a die. You check by performing multiple simultaneous trials of picking the cards blindfold and throwing a die. You note that the number shown by the method of picking up a card and throwing a real world die, sums to a number between 2 and 12. Which total would be likely to appear more often – 8,9 or 10?
- a) 8 b)All are equally likely c)9 d)10

#### PATTERN 70

- 69) Given a collection of points P in the plane , a 1-set is a point in P that can be separated from the rest by a line, .i.e the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The minimum value of  $n_1(P)$  over all configurations P of 5 points in the plane in general position (.i.e no three points in P lie on a line) is
- a) 3 b)5 c)2 d)8

Exam/Interview Date : 18-Nov-2010

No of Rounds : Screening Test

Location : Delhi

Contributor Name : Karthikeyan

Hi Friends first of all thanks for Placementpaper.net, My classmates and Karthikeyan supporting me in getting placed in TCS.

Selection process:

1) Written Test 2) Technical cum HR interview.

Written Test: Written test consists of 35 questions 80min, previously it is 60min but now time they increased 20min. It is an online test .

Pattern 1:

1.  $(1/2)$  of a number is 3 more than the  $(1/6)$  of the same number?  
a) 6 b) 7 c) 8 d) 9

Solution: Let the number be  $x$ ,  $((1/2)*x)=3+(1/6)*x$ , Then solve  $x$

2.  $(1/3)$  of a number is 3 more than the  $(1/6)$  of the same number?  
a) 6 b) 16 c) 18 d) 21

3.  $(1/3)$  of a number is 6 more than the  $(1/6)$  of the same number?  
a) 6 b) 18 c) 36 d) 24

4.  $(2/3)$  of a number is 4 more than the  $(1/6)$  of the same number?  
a) 6 b) 8 c) 36 d) 24

5.  $(1/3)$  of a number is 5 more than the  $(1/6)$  of the same number?  
a) 6 b) 36 c) 30 d) 72

Pattern 2:

1. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160.....in tank B. (At the end of first hour, B has 10 liters, second hour it has 20 liters and so on). If tank B is  $1/32$  filled of the 21 hours, what is total duration of hours required to fill it completely? a) 26 B) 25 c) 5 d) 27

Solution: for every hour water in tank B is doubled, Let the duration to fill the tank B is  $x$  hours.  $x/32$  part of water in tank B is filled in 21 hours, Next hour it is doubled so,  $2*(x/32)$  part i.e  $(x/16)$  part is filled in 22 hours, Similarly  $(x/8)$ th part in 23 hours,  $(x/4)$ th part is filled in 24 hours,  $(x/2)$ th part is filled in 25 hours,  $(x)$ th part is filled in 26 hours So answer is 26 hours.

2. There are two pipes A and B. If A filled 10 liters in an hour, B can fill 20 liters in same time. Likewise B can fill 10, 20, 40, 80, 160..... If B filled in  $1/16$  of a tank in 3 hours, how much time will it take to fill the tank completely?

a) 9 B) 8 c) 7 d) 6

3. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160.....in tank B.  $1/8$  th of the tank B is filled in 22 hours. What is the time to fill the tank fully?

a) 26 B) 25 c) 5 d) 27

4. A tank is filled with water. In first hour 10 liters, second hours 20 liters, and third hour 40 liters and so on...If time taken to fill  $\frac{1}{4}$  of the tank if 5 hours. What is the time taken to fill up the tank?

a) 5 B)8 c)7 d)12.5

5. If a tank A can be filled within 10 hours and tank B can be filled  $\frac{1}{4}$  in 19 hours then, what is the time taken to fill up the tank completely?

a) 21 B)38 c)57 d)76

Pattern 3:

1. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. Hence the current average age has become 45. Find the age of seventh person?

a) 43 b)69 c)52 d)31

Solution: Total age of 6 persons is  $x$  hours, after two years total age of 6 persons is  $x+12$ . Average age of 6 persons is after two years is 43. So  $(x+12)/6=43$ , then solve  $x$ , After 7th person is added then  $(x+7^{\text{th}} \text{ person age})/7=45$  So we will get 7th person age easily

2. In a market 4 men are standing. The average age of the four before 4years is 45, after some days one man is added and his age is 49. What is the average age of all?

a) 43 b)45 c)47 d)49

3. In a shopping mall with a staff of 5 members the average age is 45 years. After 5 years a person joined them and the average age is again 45 years. What's the age of 6th person?

a) 25 b)20 c)45 d)30

4. In a market 4 men are standing .The average age of the four before 2 years is 55, after some days one man is added and his age is 45. What is the average age of all?

a) 55 b)54.5 c)54.6 d)54.7

Pattern 4:

1. In the reading room of a library, there are 23 reading spots. Each reading spot consists of a round table with 9 chairs placed around it. There are some readers such that in each occupied reading spot there are different numbers of readers. If in all there are 36 readers, how many reading spots do not have even a single reader?

a)8 b)none c)16 d)15

Solution: 23 reading spots, Each reading spot consists of 9 chairs placed around it so There are some readers such that in each occupied reading spot there are different numbers of readers. For each table different no of persons are sat, so for first table 1 person is sit, 2nd table 2 persons are sit 36 readers means  $(1+2+3+4+5+6+7+8)$  so 8 tables are filled so  $23-8=15$  reading spots does not have single reader.

2. In the reading room of a library, there are 10 tables, 4 chairs per table. In each table there are different numbers of people seated. How many tables will be left out without at least 1 person?

a) 8 b)6 c)2 d)7

3. In the reading room of a library, there are 10 tables, 4 chairs per table. In each table there are different numbers of people seated. How many ways they will sit in the library so that no chair

would be blank?

- a) 8 b) 6 c) 2 d) 7

Pattern 5:

1. A man jogs at 6 mph over a certain journey and walks over the same route at 4 mph. What is his average speed for the journey?

- a) 2.4 mph b) 4.8 mph c) 4 mph d) 5 mph

Solution: Average speed= $(2*x*y)/(x+y)$

2. A man travels from A to B at 4 mph over a certain journey and returns over the same route to A, at 5 mph. What is his average speed for the journey?

- a) 4.44 mph b) 4.8 mph c) 4.887 mph d) 5 mph

3. A person is rock climbing at an altitude of 800 m. He goes up by 7 mph. and comes down by 9 mph. What was his average speed?

- a) 7.875 mph b) 7.125 mph c) 7 mph d) 7.5 mph

4. Find average speed if a man travels at speed of 24 kmph up and 36 kmph down at an altitude of 200m?

- a) 28.8 mph b) 27.8 mph c) 27.5 mph d) 30 mph

5. Person travels to a hill, if he goes from A to B with speed of 4 kmph and returns back to B with speed of 5 kmph. What is his average speed of journey?

- a) 4.5 kmph b) 4.44 kmph c) 9 kmph d) 4.245 kmph

6. A man travels from A to B at 70 mph over a certain journey and returns over the same route to A, at 80 mph. What is his average speed for the journey?

- a) 74.66 b) 75 c) 74.33 d) 74.99

Find average speed if a man travels at speed of 24 kmph up and 36 kmph down at an altitude of 200m.

- a) 28.8 b) 28 c) 27 d) 28.6

Pattern 6

1. Susan made a block with small cubes of 8 cubic cm volume to make a block, 3 small cubes long, 9 small cubes wide and 5 small cubes deep. She realizes that she has used more small cubes than she really needed. She realized that she could have glued a fewer number of cubes together to look like a block with same dimensions, if it were made hollow. What is the minimum number of cubes that she needs to make the block?

- a) 114 b) 135 c) 21 d) 71

Solution: I do not know perfectly but I got some solutions from internet I do not know correctly whether it is true or not,  $((3*9*5)) - ((3-2)*(9-2)*(5-2))$  so answer is 114.

2. A boy wants to make cuboids of dimension 5m, 6m and 7m from small cubes of .03 m<sup>3</sup>. Later he realized he can make same cuboids by making it hollow. Then it takes some cubes less. What is the number of the cubes to be removed?

- a) 2000 b) 5000 c) 3000 d) 7000

3. Smita was making a cube with dimensions 5\*5\*5 using 1\*1\*1 cubes. What is the number of cubes needed to make a hollow cube looking of the same shape?

- a) 98 b) 104 c) 100 d) 61

4. Leena cut small cubes of 10 cm dimension each. She joined it to make a cuboid of length 100 cm, width 50 cm and depth 50 cm. How many more cubes does she need to make a perfect cube?

- a)500 b)250 c)750 d)650

5. Leena cut small cubes of 3 cubic cm each. She joined it to make a cuboid of length 10 cm, width 3 cm and depth 3 cm. How many more cubes does she need to make a perfect cube?

- a) 910 b) 250 c) 750 d) 650

6. A lady builds 9cm length, 10cm width, 3cm height box using 1 cubic cm cubes. What is the minimum number of cubes required to build the box?

- a) 730 b) 270 c) 720 d) 310

Pattern 8:

1.  $(40*40*40 - 31*31*31)/(40*40+40*31+31*31) = ?$

- a)8 b)9 c)71 d)51

Solution:  $a^3 - b^3 = (a-b)(a^2 + ab + b^2)$  so from this formula we will find (a-b) value

2.  $(98*98*98 - 73*73*73)/(98*98*98 - 73*73*73) = ?$

- a).171 b).4 c).420 d).415

3.  $(209*144)^2 + (209*209) + (209*144) + (144*144) = ?$

- a)905863729 b)905368729 c)905729368 d)65

Pattern 9:

1.  $((4x+3y)+(5x+9y))/(5x+5y) = ?$  as  $(x/2y) = 2$

- a)8 b)none c)16 d)15

Solution: substitute  $x=4y$  in above we can find solution

2.  $x/2y = 2$ , then  $2x/x-2ay = ?$

- a)4 b)8 c)16 d)2

3.  $3X/5Y = 5Y/3X$ ....Find the value of X/Y

- a)3/5 b)5/3 c)2/5 d)5/2

4. What is the value of  $(3X+8Y)/(X-2Y)$ , if  $X/2Y=2$

- a)8 b)none c)10 d)13

5.  $((4x+3y)+(5x+9y))/(5x+5y) = ?$  as  $(x/2y) = 2$

- a)48/5 b)46/5 c)47/5 d)49/5

6.  $((4x+2y)/(4x-2y)) = ?$  as  $(x/2y) = 2$

- a)8/7 b)9/7 c)11/7 d)6/7

Pattern 10:

1. A girl has to make pizza with different toppings. There are 8 different toppings. In how many ways can she make pizzas with 2 different toppings?

- a)16 b)56 c)112 d)28

Solution: 8c2

2. A pizza shop made pizzas with many flavors. There are 10 different flavors, in that 7 flavors are taken to make pizza. In how many ways they can arrange?

- a)240 b)120 c)65 d)210

3. A pizza shop made pizzas with many flavors. There are 9 different flavors, in that 2 flavors are taken to make pizza. In how many ways they can arrange?

- a)16 b)26 c)36 d)46

Pattern 11:

1. 3, 22, 7, 45, 15, ?, 31

- a)91 b)151 c)90 d)5

2. 8 6 17 14 35 31 75 \_ 143? 3. Inspired by Fibonacci series Sangeet decided to create his own series which is 1, 2, 3, 7, 7, 22, 15, 67, 31, \_, 63?

- a)202 b)31 c)76 d)49

4. 3, 12, 7, 26, 15, ?

- a)54 b)27 c)108 d)31

5.  $1! + 2! + \dots + 50! = ?$

- a) $3.1035*10^{64}$  b) $2.1021*10^{65}$  c) $3.1035*10^{63}$  d) $3.1035*10^{62}$

6. 1, 2, 3, 6, 7, 14, \_, 32?

7. 5, 9, 12, 18, 26, 36, 47, 72, \_?

- a)75 b)135 c)100 d)55

8. 3, 15, x, 51, 53, 159, 161

- a)17 b)34 c)54 d)112

Pattern 12: 1. Simple question but big one on average age.sth like a, b, c weighted separately 1st a, b, c ,then a& b, then b &c ,then c & a at last abc, the last weight was 167,then what will be the average weight of the 7 reading?

- a)95 b)95.428 c)95.45 d)94

Solution: last weight abc is 167 i.e three persons weight is 167 .in first 6 combinations a,b,c,ab,bc,ac i.e a checked weight for 3 times totally like that and c also so total weight in all 7 combinations is  $(4*167)$

Average is  $(668/7)=95.42$

Pattern 13: 1. A toy train produces 10 different sounds when it moves around a circular toy track of radius 5 m at 10 m per min. However, the toy train is defective and it now produces only 2 different tunes at random. What are the odds that the train produces for consecutive music tones of the same type?

- a) 1 in 16 B)1 in 4 c)1 in 8 d)1 in 32

Solution: initially it produces 10 sounds and the defect came and now it produces only 2 different sounds and consecutively so there are totally 2 sounds and we have to select on sound and the probability is  $\frac{1}{2}$  and it produces the same sound consecutively for 2 times so the probability becomes  $\frac{1}{2} * \frac{1}{2} = \frac{1}{4}$

2. A car manufacturer produces only red and blue models which come out of the final testing area at random. What are the odds that five consecutive cars of same color will come through the test area at any one time?

- a)1 in 16 b)1 in 125 c)1 in 32 d)1 in 25

Pattern 15:

1. A triangle is made from a rope. The sides of the triangle are 25 cm, 11 cm and 31 cm. What will be the area of the square made from the same rope?

- a)280.5625 b)240.5625 c)280.125 d)240

Solution: add all sides  $25+11+31$  to get rope length rope length =67, rope is made in to as square So side of square is  $67/4=16.75$  and so area is  $16.75*16.75=280.5625$

2. A triangle is made from a rope. The sides of the triangle are 21 cm, 24 cm and 28 cm. What will be the area of the square made from the same rope? a)280.5625 b)333.0625 c)333.0125 d)400

Pattern 16: 1. What is the distance between the z-intercept from the x-intercept in the equation  $ax+by+cz+d=0$

Solution: intercept form equation

2. What is the distance of the z-intercept from the x-intercept in the equation  $ax+by+cz=d$  (I do not remember the values of a, b, c, d).

Pattern 17:

1. A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he travelled 1 mile in north direction & reached at North Pole. There he saw a bear. He then followed the bear around 1 hr with a speed of 2 km/hr in east direction. After that he travelled in south direction & reached at his lab in 2 hrs. Then what is the color of the bear?

- a)white b)black c)gray d)brown

Solution is :White .above all the matter is nonsense

Pattern-18:

1. Out of 7 children the youngest is boy then find the probability that all the remaining children are boys

- a)1/64 b)1/32 c)1/128 d)1/256

Pattern 19:

1. Usha bought a linen cloth and rope to build a tent. If the rope is 153 m long and it is to be cut into pieces of 1m length, then how many cuts are to be made to cut the ropes into 153 pieces?

- a)153 b)152 c)154 d)155

Solution:to make it 153 pieces we have to cut 152 times so obviously after last cut we got 153rd piece

2. A person has to make 146 pieces of a long bar. He takes 4 seconds to cut a piece. What is the total time taken by him in seconds to make 146 pieces?

- a)584 b)580 c)730 d)725

Solution:146 pieces means 145 cuts so for each cut it takes 4 seconds means total time  $145*4=580$

3. A person has to make 141 pieces of a long bar. He takes 2 seconds to cut a piece. What is the total time taken by him in seconds to make 141 pieces?  
a)560 b)280 c)112 d)324

Pattern 20:

1. Spores of a fungus, called late blight, grow and spread infection rapidly. These pathogens were responsible for the Irish potato famine of the mid-19th century. These seem to have attacked the tomato crops in England this year. The tomato crops have reduced and the price of the crop has risen up. The price has already gone up to \$45 a box from \$27 a box a month ago. How much more would a vegetable vendor need to pay to buy 27 boxes this month over what he would have paid last month?

- a) \$27 b)\$ 18 c)\$45 d)\$ 486

Solution: see last 3 lines only answer is  $45-27=18$

Pattern 21:

1. A Person buys a horse for 15 ponds, after one year he sells it for 20 pounds. After one year, again he buys the same horse at 30 pounds and sells it for 40 pounds. What is the profit for that person?

Solution: here we cannot consider depreciation or decay of item acco answer so go acc to answer  $5+10=15$ \$profit

Pattern 22:

1. John buys a cycle for 31 dollars and given a cheque of amount 35 dollars. Shop Keeper exchanged the cheque with his neighbor and gave change to John. After 2 days, it is known that cheque is bounced. Shop keeper paid the amount to his neighbor. The cost price of cycle is 19 dollars. What is the profit/loss for shop keeper?

- a)loss 23 b)gain 23 c)gain 54 d)Loss 54

Solution: loss =change of money given to john(4\$)+actual cycle cost  $19\$=23\$$  loss

Pattern 23:

1. A lady has fine gloves and hats in her closet- 18 blue, 32 red, and 25 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

- a)50 b)8 c)60 d)42

2. A lady has fine gloves and hats in her closet- 14 blue, 20 red, and 18 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

3. A lady has fine gloves and hats in her closet- 13 blue, 27 red, and 40 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

4. A lady has fine gloves and hats in her closet- 25blue, 7 red, and 9 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and

a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

5. A lady has fine gloves and hats in her closet- 26 blue, 30 red, and 56 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

Pattern 24:

1. Sangakara and Ponting selects batting by using a dice, but dice is biased. So to resolve, Ponting takes out a coin. What is the probability that coin shows correct option? a)1/2 b)1/6 c)1/12 d)6/10

Solution is  $\frac{1}{2}$ .

2. There is a die with 10 faces. It is not known that fair or not. 2 captains want to toss die for batting selection. What is the possible solution among the following?

a) If no. is odd it is head, if no. is even it is tail

b) If no. is odd it is tail, if no. is even it is head

c) Toss a die until all the 10 digits appear on top face. And if first no. in the sequence is odd then consider it as tail. If it is even consider it as head.

Pattern 25:

1. In a family there are some boys and girls. All boys told that they are having equal no of brothers and sisters and girls told that they are having twice the no. of brothers than sisters. How many boys and girls present in a family?

a)4 boys and 3 girls b)3 boys and 4 girls c)2 boys and 5 girls d)5 boys and 2 girls

Pattern 26:

1. 10men and 10 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa?

a)22 b)20 c)10 d)none

2. There are 100 men and 100 women on the dance floor. They want to dance with each other. Then which of the following statements is always true: a) There are 2 men who danced with equal no. of women's b) There are 2 women who danced with equal no. of men  
a) both a and b b)only a c)only b d)none

Pattern 27:

1. Middle- earth is a fictional land inhabited by hobbits, elves, dwarves and men. The hobbits and elves are peaceful creatures that prefer slow, silent lives and appreciate nature and art. The dwarves and the men engage in physical games. The game is as follows. A tournament is one where out of the two teams that play a match, the one that loses get eliminated. The matches are played in different rounds, where in every round; half of the teams get eliminated from the tournament. If there are 8 rounds played in knock out tournament, how many matches were played?

a)257 b)256 c)72 d)255

Solution: do not know perfect logic  $2^8 - 2$ . A game is played between 2 players and one player is declared as winner. All the winners from first round are played in second round. All the winners

from second round are played in third round and so on. If 8 rounds are played to declare only one player as winner, how many players are played in first round?

- a)256 b)512 c)64 d)128

Pattern 28:

1. Metal strip of width 'x' cm. 2 metal strips are placed one over the other, then the combine length of 2 strips is 'y'. If 'z' strips are placed in that manner. What is the final width of that arrangement?

2. A, B, C, D, E are there among A, B, C are boys and D, E are girls D is to the left of A and no girl sits at the middle and at the extremes. Then what is the order of their sittings.

Pattern 29:

1. There is 7 friends (A1, A2, A3....A7).If A1 have to have shake with all without repeat. How many handshakes possible? a)6 b)21 c)28 d)7 Solution:For handshakes type question i am confirming u that if the there are n members are there

Handshakes are given in linear manner = $n-1$ (last person cannot give hand shake to first person)

Handshakes are given in cyclic manner = $n$ (last person can give hand shake to first person)

But i do not know perfectly for repetition it is  $nc^2$

2. 49 members attended the party. In that 22 are males, 17 are females. The shake hands between males, females, male and female. Total 12 people given shake hands. How many such kinds of such shake hands are possible? a)122 b)66 c)48 d)128 Pattern 30: 1. B is taller than j and 3 pillars. P is shorter than B and 2 pillars is j shorter/taller than P? a)yes b)no c)may be d)can't find

2. There are 1000 pillars for a temple. 3 friends Linda, Chelsey, Juli visited that temple. (Some unrelated stuff) Linda is taller than Chelsea and taller than 2 of 1000 pillars. Julia is shorter than Linda. Find the correct sentence? a) Linda is shorter among them b) Chelsea is taller than Julia c) Chelsea is shorter than Julia d) Cannot determine who is taller among Chelsea and Julia Pattern-31 1. Entry ticket to an exhibition ranges from 1p to 31p. You need to provide exact change at the counter. You have 31p coin. In how many parts will u divide 31p so that u will provide the exact change required and carry as less coins as possible?

- a)4 b)5 c)6 d)7

Solution: in btech we studied 8 4 2 1 code for binary system in digital logic proceed in that way for answer it is 16 8 4 2 1 if u add all we will get 31 so 5 coins required

Pattern 32 1. Peter and Paul are two friends. The sum of their ages is 35 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the present age of Peter?

- a)8 b)20 c)16 d)15

Pattern 33

1. 20 men handshake with each other without repetition. What is the total number of handshakes made?

- a)190 b)210 c)150 d)250

2.10 people are there, they are shaking hands together, how many hand shakes possible, if they are in no pair of cyclic sequence.

- a)45 b)9 c)12 d)10

#### Pattern 34

1. If there are 2 wheelers and 4 wheelers parked in a school located at the heart of the city, find the number of 4 wheelers parked there if there were 20 two wheelers parked there

- a)48 b)50 c)52 d)64

Solution: proceed with answer is best in question they will give total no of wheels

2. If there are 2 wheelers and 4 wheelers parked in a school located at the heart of the city, find the number of 4 wheelers parked there if there were 58 wheels are parked there

- a)10 b)33 c)22 d)none

#### Pattern 35

1. A man whose age is 45 yrs has 3 sons named John, Jill, Jack. He went to a park weekly twice. He loves his sons very much. On a certain day he found the shop keepers selling different things. An apple cost 1penny, 2chocalate costs 1penny & 3 bananas cost 1 penny. He has bought equal number of apple, chocolate & banana for each son. If the total amount he invested is 7 penny then how many he has bought from each piece for his son?

- a)1app,1cho,1 banana b)1 app,2cho,3 banana c)1app,2cho,1banana

2. One person had three children. He had 7 pennies. Find the distribution of the fruits among the three children. A melon costs 1 penny, 2 oranges cost 1 penny and 3 grapes cost 1 penny

- a)2 melons, 1 orange, 1 grape    b) 2 melons, 2 orange, 1 grape    c) 1 melons, 2 orange, 1 grape.

#### Pattern 36

1) The age of the two friends were in the ratio of 6:5. If the sum of their ages is 55. Then after how many years their ratio will become 8:7?

- a)11 b)7 c)10 d)12

Solution:  $6x+5x=55$ , so  $x=5$ , put first ratio after substitution is  $(6*5)/(5*5)$  and second ratio is  $40/35$  So difference in numerators  $40-35=10$  years

2) The age of the two friends were in the ratio of 6:5. If the sum of their ages is 66. Then after how many years their ratio will become 7:6?

- a)11 b)6 c)10 d)12

3) The age of the two friends were in the ratio of 2:3. If the sum of their ages is 55. Then after how many years their ratio will become 4:5?

- a)11 b)33 c)22 d)44

#### Pattern 37

1) A volume of 10936 l water is in a container of sphere. How many semispheres of volume 4l each will be required to transfer all the water into the small semispheres?

- a)2812 b)8231 c)2734 d)4222

#### Pattern 38

1) A person is manufacturing a house. He bought 20 ropes of wire which has a density of 300 Kg/m<sup>3</sup>. The height of the building to be constructed is 40 m. If the capacity of the current passed

in the wire is 20 A and the voltage capacity is 80 Volts. Then what will be the opposing force to the current if the wire is used ?

- a)2 b)4 c)8 d)1600

Solution: ohms law  $V=IR$ , Opposing force of current is resistance,  $R=v/i$

#### Pattern 39

1) A horse chases a pony 2 hours after the pony runs. Horse takes 3 hours to reach the pony. If the average speed of the horse is 81Kmph. Then what is the average speed of the pony?

- a)46.4 b)51 c)53.4 d)48.6

Solution: Horse takes 3 hours to cover the distance. Pony takes  $3+2 = 5$  hours to cover the same distance. Velocity = distance/time, distance travelled by them is equal it is  $81*3 = 243$  km, speed of pony =  $243/5 = 48.6$

2) A horse chases a pony 3 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 35 kmph, what s the average speed of the pony?

#### Pattern 40

1) The difference between two no is 9 and the product of the two is 14. What is the square of their sum?

- a)120 b)130 c)137 d)145

Solution:  $a-b=9$ ,  $ab=14$ ,  $(a-b)^2=a^2+b^2-2*a*b$  2) The sum of two no is 5 and the product of the two is 14. What is the sum of their squares?

3) The sum of the squares of two no is 12 and their sum is 15. Find the product of the two no?

#### Pattern 41

1) On planet korba, a solar blast has melted the ice caps on its equator. 9 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of circle, and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4*\sqrt{(t-9)}$  for  $t \geq 9$  where  $d$  represents the diameter in mm and  $t$  the number of years since the solar blast. Jagan recorded the radius of some echina at a particular spot as 7mm. How many years back did the solar blast occur?

- a) 17 b) 21.25 c) 12.25 d) 14.05

Solution: radius = 7mm, then diameter  $= 2 * \text{radius}$ , substitute diameter  $d$  in above equation u will get answer

#### Pattern 42

1) A man goes 50Km north , then turned left walked 40Km, then turned right ? In which direction he is?

- a)North b)South c)East d)West

#### Pattern 43

1) In T.Nagar the building were numbered from 1 to 100. Then how many 4's will be present in the numbers?

- a)18 b)19 c)20 d)21.

Solution: you have to count and answer but be prepare with answer

2) In T.Nagar the building were numbered from 1 to 100. Then how many 6's will be present in the numbers?

- a) 18 b) 19 c) 20 d) 21

3) In T.Nagar the building were numbered from 1 to 100. Then how many 1's will be present in the numbers?

- a) 18 b) 19 c) 20 d) 21

4) In T.Nagar the building were numbered from 1 to 100. Then how many 0's will be present in the numbers?

- a) 18 b) 19 c) 20 d) 11

#### Pattern 44

1) A number when divided by D leaves a remainder of 8 and when divided by 3D leaves a remainder of 21. What is the remainder left, when twice the number is divided by 3D?

- a) 13 b) cannot be determined c) 3 d) 42

#### Pattern 45

1.) Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.

- a) 20.72 b) 3.5 c) 238.25 d) 6.18

Solution: speed of Ferrari = $4 \times 35 = 140$ , time=distance/velocity,

2) Ferrari S.P.A is an Italian sports car manufacturer based in Marane llo, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 46 km/hr and the distance traveled by the Ferrari is 953 km, find the total time taken for Rohit to drive that distance.

- a) 20.72 b) 5.18 c) 238.25 d) 6.18

#### Pattern 46

1) A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says ' At least n of the statements on this sheet are false. ' Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The odd numbered statements are true and the even numbered are false.
- c) The first 35 statements are true and the last 35 are false.
- d) The first 35 statements are false and the last 35 are true.

#### Pattern 47

- 1) A man goes north 37km.turns left goes 2km.turns right goes 17km.turns right goes 2km. find distance b/w starting ending point.  
a) 54 b) 27 c) 81 d) 67

#### Pattern 48

- 1) If there are 30 cans out of them one is poisoned if a person tastes very little he will die within 14 hours so if there are mice to test and 24 hours to test, how many mice are required to find the poisoned can?  
a) 3 b) 2 c) 6 d) 1

#### Pattern 49

- 1) If a and b are mixed in 3:5 ration and b and c are mixed in 8:5 ration if the final mixture is 35 liters, find the amount of b?  
A) 13.34 b) 15.73 c) 16.73 d) 9.45

Solution: solve for a:b:c,then b ratio is  $b/(a+b+c)*35$

#### Pattern 50

- 1) If we subtract a number with y, we get 4 increase of number, once it got divided by y itself...  
Find that number??  
A) 13 b) 12 c) 14 d) 11

#### Pattern 51

- 1) It is the class with the seating arrangement in 4 rows and 8 columns. When the teacher says 'start' the girl who is sitting in first row and first column will say 1, then the next girl sitting behind her will say 4, the next girl sitting behind that girl will say 7, in a particular order each girl is telling a number, the following girls told 10, 13 next turn is yours what u will say?  
a) 15 b) 17 c) 14 d) 16  
Solution: it is a series 1,4,7,10,13.....

#### Pattern 52

- 1) It is dark in my bedroom and I want to get two socks of the same color from my drawer, which contains 24 red and 24 blue socks. How many socks do I have to take from the drawer to get at least two socks of the same color?  
A) 2 b) 3 c) 48 d) 25
- 2) Lady has 2 select gloves & hat from a basket. In the dark, she can distinguish hat&gloves. 14red, 20blue, 18green r there. Find probability that any selected glove pair has same color.
- 3). A lady had fine gloves and hats. 25 blue, 7 red and 9grey. She had to select a pair among them. But there was no light so she had to select in darkness the correct pair with a glove and a hat. Therefore how many combinations of same color she can select?

#### Pattern 53

- 1) If the Valentine's Day in 2005 falls on Monday, then on which day will the Valentine's Day fall on 2010? A) Saturday b) Thursday c) Wednesday d) Sunday

#### Pattern 54

1. A person run from A to B.He took  $\frac{1}{4}$  of the time less to reach B when compare to run at normal Speed.Then how many percentage he has increased his speed?

- a) 40 b) 44.4 c) 33.3 d) 22.2

Solution: i do not know perfectly but i have simple logic, $1-(\frac{1}{4})=(\frac{3}{4})$ ,then reverse it so it is  $\frac{4}{3}=1.333, 1.33-1=33.33$  like this

2. An athlete decides to run the same distance in  $\frac{1}{4}$ th less time that she usually took. By how much percent will she have to increase her average speed?

- a)40 b)44.4 c)33.3 d)22.2

#### Pattern 55

1. In a building there are 5 rooms.Each having a equal area .The length of the room is 4m and breadht is 5 m.The height of the rooms are 2m.If 17 bricks are needed to make a square meter then how many bricks are needed to make the floor of a particular room?

- a)320 b)380 c)340 d)300

Solution: area of the room is length\*breadth= $4*5=20\text{m}^2$ ,For one square meter it takes 17 bricks,For  $20\text{m}^2$  total no of bricks are  $17*20=340$ ,

#### Pattern 56

1. One man want to build a wall .The length and breadth of the wall are 20 and 30 respectively. He need 35 bricks for one square centimeter then how many bricks he need?

- a)21,500 b)30,000 c)21,000 d)20,000

#### Pattern 57

1. In a hotel we can order two types of varities,but we can make 6 more variteis in home.One can choose the four varities with two from hotel as must.Find how many ways one can order.

- a)14 b)15 c)56 d)28

#### Pattern 58

1. If a pipe can fill the tank within 6hrs.But due to leak it takes 30 min more.Now the tank is full then how much time will it take to empty the tank throught the leak.? a)78 b)56 c)66 d)59 Pattern 59 1.The bacteria has the probability of split into 3 and probability to die is  $1/3$ rd of the total bacteria.Let the probability is P.Some of them survived with probability  $1/5$ .Then which among the following relation is true?

- a) $P=1/3+1/5*3$  b) $P=1/5*(1/8-3)$

2. There is a bacteria which has the probability of die  $1/3$  of its total number or it may tripled. Find out the probability

- A.  $P=1/3+(2/3*p^3)$  B.  $P=2/3+(2/3*p^3)$  C.  $P=2/3+(1/3*p^3)$  D  $P=2/3+(2/3*p^3)$

#### Pattern 60

1. There was a grand mother in a village who had a grand child.Upon asking her grand childs age she told that she is as older as many days old as her daughters age in weeks and as many days as her own age in years.The sum of the three is 130.then how old is the child.?

#### Pattern 61

1) In T.Nagar the building were numbered from 1 to 100. Then how many 4's will be present in the numbers?

- a)18 b)19 c)20 d)21

2) In Tnagar many buildings were under residential category. for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many time 6 will appear in building numbering?

#### Pattern 62

1) Amrith told to Anand in front of a Photo that "He is the son of my father's son". Find who is in the picture if amrith have no brothers and sisters.

- a)Amrith himself    b)Amrith's Uncle    c)Amrith's Father    d)Amrith's son

2) One person has no siblings and says," the guy in the photo is the only son of my father 's son". What is the relation of the guy to the person?

#### Pattern 63

1) One grand father has 3 grand children two of the age difference is 3. Eldest child age is 3 times the youngest child's age and the eldest child age is two year more than the sum of other two children. Find what is the age of the elders child?

- a)18 b)22 c)30 d)10.

Solution: there are 3 childs, let the age of younger be  $x$ , elder be  $3x$ , so the middle one be  $m$ ,  $3x=2+x+m$ , then we have  $a-b=3$  or  $b-c=3$ , or  $a-c=3$ , then for answer we have to go via options , substitute that in above equations

2) One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

3) One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

#### Pattern 64

1) In a school, for a student out of 100 he got 74 of average for 7 subjects and he got 79 marks in the 8th subject. what is the average of all the subject?

- a)76.251 b)80.25 c)74.265 d)74.625

Solution: total marks= $74*7=518$ , then average= $(518+79)/8=74.625$

#### Pattern 65

1) 3 persons a,b,c were there A always says truth,B lies on Monday,tusday,& Wednesday.but C lies on thrusday,Friday & saturday .one day A said"that B & C said to A that" B said "yesterday way one of the days when I lies",C said that"yesterday way one of the days when I lies too".then which day was that?

- a)Sunday b)Thursday c)Saturday d)Tuesday

#### Pattern 66

1) Which is the smallest no which divides 2880 and gives a perfect square?

- a)4 b)9 c)3 d)5

Solution: for answer solve via options

Pattern 67

1) How many 9 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by 4 if the repetition is allowed?

- a)57 b)56 c)59 d)58

2) how many 13 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by 4 if repetition of digits is allowed?

3) By using 1,2,3,4,5,how many 5 digit no. can be formed which is divisible by 4,repetation of no. is allowed??

4) Form 8 digit numbers from by using 1, 2,3,4,5 with repetition is allowed and must be divisible by4?

5) How many of 14 digit numbers we can make with 1,2,3,4,5 that are divisible by 4. Repetitions allowed.

Pattern 68

1) Consider two tumblers, the first containing Water and next contains coffee. Suppose you take one spoon of water out of the first tumbler and pour it into the second tumbler. After moving you take one spoon of the mixture from the second tumbler and pour it back into the first tumbler . Which one of the following statement holds now?

- a) There is less coffee in the first tumbler than water in the second tumblers  
b) There is more coffee in the firs tumbler than water in the second tumbler  
c) There is as much coffee in the first tumbler as there is water in the second tumbler  
d) None of the statements holds true

Solution :think wisely and answer these are asked in my paper 2 or 3 questions

2) Two bowls are taken, one contains water and another contains tea.one spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl. Which statement will hold good for the above?

Pattern 69

1) Six friends decide to share a big cake. Since all of them like the cake, they begin quarreling who gets to first cut and have a piece of the cake. One friend suggests that they have a blindfold friend choose from well shuffled set of cards numbered one to six. You check and find that this method works as it should simulating a fair throw of a die. You check by performing multiple simultaneous trials of picking the cards blindfold and throwing a die. You note that the number shown by the method of picking up a card and throwing a real world die, sums to a number between 2 and 12. Which total would be likely to appear more often – 8,9 or 10?  
a) 8 b)All are equally likely c)9 d)10

Solution: calculate how many times 8,9,10 will come when we throw 2 dice, and answer

Pattern 70

Q1. Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line, i.e the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The minimum value of  $n_1(P)$  over all configurations P of 5 points in the plane in general position(.i.e no three points in P lie on a line) is

- a)3 b)5 c) 2 d)1

Ans: 5

For below questions,answers i am not sure whether they are correct or not u have to solve urself

Q2. The citizens of planet nigiet are 8 fingered and have thus developed their decimal system in base 8. A certain street in nigiet contains 1000 (in base 8) buildings numbered 1 to 1000. How many 3s are used in numbering these buildings?

- a) 54 b) 64 c) 265 d) 192

Ans: 192 - Some times base value is chang like: 9finger, 1 to 100(base 9)

Q3. Given 3 lines in the plane such that the points of intersection form a triangle with sides of length 20, 20 and 30, the number of points equidistant from all the 3 lines is

- a)1 b)3 c)4 d)0

Q4. Hare in the other. The hare starts after the tortoise has covered 1/5 of its distance and that too leisurely. A hare and a tortoise have a race along a circle of 100 yards diameter. The tortoise goes in one direction and the hare in the other. The hare and tortoise meet when the hare has covered only 1/8 of the distance. By what factor should the hare increase its speed so as to tie the race?

- a) 37.80 b)8 c) 40 d) 5

Ans: 37.80

Q5. Here 10 programmers, type 10 lines with in 10 minutes then 60 lines can type within 60 minutes. How many programmers are needed?

- a) 16 b) 6 c) 10 d) 60

Solution: (men\*time)/work)

Ans: 10 This type of Q's repeated 4times for me but values are different.

Q6. Alok and Bhanu play the following min-max game. Given the expression  $N = 9 + X + Y - Z$  Where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be

- a) 0 b) 27 c) 18 d) 20

The Q's concept is same but the equation of N's is changing.

Q7. Alice and Bob play the following coins-on-a-stack game. 20 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack.

Alice starts and the players take turns. A turn consists of moving the coin on the top to a position  $i$  below the top coin ( $0 = i = 20$ ). We will call this an  $i$ -move (thus a 0-move implies doing nothing). The proviso is that an  $i$ -move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on

top when it's a player's turn then the player wins the game. Initially, the gold coin is the third coin from the top. Then

- a) In order to win, Alice's first move should be a 1-move.
- b) In order to win, Alice's first move should be a 0-move.
- c) In order to win, Alice's first move can be a 0-move or a 1-move.
- d) Alice has no winning strategy.

Ans: d

Q8. For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A's chances of winning. Let's assume such rumors to be true and that in a match between Ghana and Bolivia, Ghana the stronger team has a probability of  $\frac{2}{3}$  of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?

- a) $\frac{1}{9}$  b) $\frac{4}{9}$  c) $\frac{5}{9}$  d) $\frac{2}{3}$

Ans:  $\frac{5}{9}$

Q9. 36 people  $\{a_1, a_2, \dots, a_{36}\}$  meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs,  $\{a_1, a_2\}, \{a_2, a_3\}, \dots, \{a_{35}, a_{36}\}, \{a_{36}, a_1\}$ . Then size of the smallest set of people such that the rest have shaken hands with at least one person in the set is

- a)12 b)11 c)13 d)18

Ans: 18

Q10. After the typist writes 12 letters and addresses 12 envelopes, she inserts the letters randomly into the envelopes (1 letter per envelope). What is the probability that exactly 1 letter is inserted in an improper envelope?

- a) $\frac{1}{12}$  b)0 c) $\frac{12}{212}$  d) $\frac{11}{12}$

Ans: b

Q11. A sheet of paper has statements numbered from 1 to 40. For each value of n from 1 to 40, statement n says "At least  $n$  of the statements on this sheet are true." Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The first 26 statements are false and the rest are true.
- c) The first 13 statements are true and the rest are false.
- d) The odd numbered statements are true and the even numbered are false.

Ans: c

Q12. There are two boxes, one containing 10 red balls and the other containing 10 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is

- a) $\frac{1}{2}$  b) $\frac{14}{19}$  c) $\frac{37}{38}$  d) $\frac{3}{4}$

Ans:  $\frac{14}{19}$

Q13. A circular dartboard of radius 1 foot is at a distance of 20 feet from you. You throw a dart at it and it hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

- a) 0.75   b) 1   c) 0.5   d) 0.25

Ans: d

Q14. 9. A and B play a game of dice between them. The dice consist of colors on their faces (instead of numbers). When the dice are thrown, A wins if both show the same color; otherwise B wins. One die has 4 red face and 2 blue faces. How many red and blue faces should the other die have if the both players have the same chances of winning?

- a) 3 red and 3 blue faces      b) 2 red and remaining blue    c) 6 red and 0 blue      d) 4 red and remaining blue

Ans: a

Q15. On planet zorba, a solar blast has melted the ice caps on its equator. 8 years after the ice melts, tiny plantoids called echina start growing on the rocks. echina grows in the form of a circle and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4 * \text{sqrt}(t - 8)$  for  $t = 8$  Where the represents the diameter in mm and t the number of years since the solar blast. Jagan recorded the time of some echina at a particular spot is 24 years then what is diameter?

- a) 8 b) 16 c) 25 d) 21

Ans: 16

Q16. A sheet of paper has statements numbered from 1 to 40. For all values of n from 1 to 40, statement n says: 'Exactly n of the statements on this sheet are false.' Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered statements are false.  
b) The odd numbered statements are true and the even numbered statements are false.  
c) All the statements are false.  
d) The 39th statement is true and the rest are false.

Ans: d

Q17. Alok and Bhanu play the following coins in a circle game. 99 coins are arranged in a circle with each coin touching two other coin. Two of the coins are special and the rest are ordinary. Alok starts and the players take turns removing an ordinary coin of their choice from the circle and bringing the other coins closer until they again form a (smaller) circle. The goal is to bring the special coins adjacent to each other and the first player to do so wins the game. Initially the special coins are separated by two ordinary coins O1 and O2. Which of the following is true?

- a) In order to win, Alok should remove O1 on his first turn.  
b) In order to win, Alok should remove one of the coins different from O1 and O2 on his first turn.  
c) In order to win, Alok should remove O2 on his first turn.  
d) Alok has no winning strategy.

Ans: d

Q18. Two pipes A and B fill at A certain rate B is filled at 10,20,40,80,. If 1/4 of B if filled in 21 hours what time it will take to get completely filled

Ans: 23 Q19. Find average speed if a man travels at speed of 24kmph up and 36kmph down at an altitude of 200m. Formula is  $2xy/(x+y)$ .

Q20. One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children.

What is the age of eldest child?

Ans: 18

Q21. Ferrari is leading car manufacturer.\*Ferrari S.p.A.\* is an Italian sports car. It has enjoyed great success. If Mohan's Ferrari is 3 times faster than his old Mercedes which gave him 35kmph if Mohan travelled 490 km in his ferrari the how much time(hours) he took? Easy one try it.

Q22. By using 1,2,3,4,5, how many 12 digit no. can be formed which is divisible by 4, repetition of no. is allowed?

Ans:  $(5)^{11}$

Q23. The cost 1 plum is 1 cent, 2 apples is 1 cent, 3 cashew is 1 cent. If father buys same amount of fruits for his 3 sons spending 7 cent then what amount of fruit each child will get?

Ans: 1plum, 2apples, 1cashew

Q24. There are some 2 wheelers and 4 wheelers parked total number of wheels present is 240 then how many 4 wheelers were there

Ans: For this question answer is deduced from the options.

Q25. One day Alice meets pal and byte in fairyland. She knows that pal lies on Mondays, Tuesdays and Wednesdays and tells the truth on the other days of the week byte, on the other hand, lies on Thursdays, Fridays and Saturdays, but tells the truth on the other days of the week. Now they make the following statements to Alice – pal. Yesterday was one of those days when I lie byte. Yesterday was one of those days when I lie too. What day is it?

a) Thursday b) Tuesday c) Monday d) Sunday

Ans: a

#### Interview:

Then coming to interview my interview is fine i am from M.Tech, Power electronics and drives.

In my college for non IT branches separate technical panel came. For M.tech power electronics and drives and power systems one technical guy came and interviewd us .But he took around 45 min or more for each person. For me my interview gone for around 45 min. Mainly they asked questions on electrical only not on C,C++,java

Mainly i told to him about my project both btech and mtech ans some hr questions like tell me abt urself,why u came to software,tell me abt tcs,why u had taken power electronics,if i reject u what will u do,can u relocate ur self,some applications of our branch ie power electronics and some day to day applications in it and some basic electrical questions like kirchoffs laws, ohms law, motor principle, generator principle, why transformer is used. What are the recent trends in power electronics.etc. Thats it.

All the best and see u in TCS

- Contributor name: Ayenampudi Murali Krishna
- Company Name: TCS
- Status: Selected
- Venue: SRM University,Chennai
- Placement Date: 26/11/2010.

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- Company Name : TCS  
Type : Fresher, Job Interview
- **TCS MODEL PREPARATION TEST -1:**
- 1. How many complete tanks of water, each with a capacity of 3 cubic meters, are needed to fill an empty cylindrical tank whose height is 3 meters and whose base has a radius of 2 meters?  
(A) 12 (B) 13 (C) 14 (D) 15 (E) 16
- 2. Any serious policy discussion about acceptable levels of risk in connection with explosions is not well served if the participants fail to use the word “explosion” and use the phrase “energetic disassembly” instead. In fact, the word “explosion” elicits desirable reactions, such as a heightened level of attention, whereas the substitute phrase does not. Therefore, of the two terms, “explosion” is the one that should be used throughout discussions of this sort.
- Which of the following is an assumption on which the argument above depends?  
(A) In the kind of discussion at issue, the advantages of desirable reactions to the term “explosion” outweigh the drawbacks, if any, arising from undesirable reactions to that term.  
(B) The phrase “energetic disassembly” has not so far been used as a substitute for the word “explosion” in the kind of discussion at issue.  
(C) In any serious policy discussion, what is said by the participants is more important than how it is put into words.  
(D) The only reason that people would have for using “energetic disassembly” in place of “explosion” is to render impossible any serious policy discussion concerning explosions.  
(E) The phrase “energetic disassembly” is not necessarily out of place in describing a controlled rather than an accidental explosion
- 3. A certain shade of gray paint is obtained by mixing 3 parts of white paint with 5 parts of black paint. If 2 gallons of the mixture is needed and the individual colors can be purchased only in one-gallon or half- gallon cans, what is the least amount of paint, in gallons, that must be purchased in order to measure out the portions needed for the mixture?  
(A) 2 (B) 2  $\frac{1}{2}$  (C) 3 (D) 3  $\frac{1}{2}$  (E) 4
- 4. To buy a computer system, a customer can choose one of 4 monitors, one of 2 keyboards, one of 4 computers and one of 3 printers. Determine the number of possible systems that a customer can choose from.  
(A) 96 (B) 98 (C) 98.5 (D) 94 (E) 100
- 5. A student can select one of 6 different mathematics books, one of 3 different chemistry books and one of 4 different science books. In how many different ways can a student select a book of mathematics, a book of chemistry and a book of science?  
(A) 14 (B) 12 (C) 72 (D) 74 (E) 76
- 6. How many 6 digit telephone numbers can be constructed with the digits 0, 1, 2, ..., 9 if each number starts with 35 and no digit appears more than once?  
(A) 2670 (B) 2680 (C) 1670 (D) 1580 (E) 1680

- 7. If the average cost of producing one widget decreases from \$12.50 to \$10.75, what is the percent of the decrease?  
 (A) 10 (B) 12.5 (C) 14 (D) 15 (E) 16
- 8. If  $a + b - c = d$ , and if  $a - b + c = e$ , then  $a =$   
 (A)  $\frac{1}{2}(d + e)$  (B)  $d - e$  (C)  $2d + e$  (D)  $d + e$  (E)  $2(d + e)$
- 9. What is the average (arithmetic mean) of  $4x + 5$ ,  $7x - 6$ , and  $-8x + 2$ ?  
 (A)  $x + 1$  (B)  $x + \frac{1}{3}$  (C)  $3x + 1$  (D)  $3x + \frac{1}{3}$  (E)  $3x + 3\frac{1}{3}$
- 10. In a classroom of 35 students, 14 are male. What percent of the classroom is male?  
 (A) 14% (B) 20% (C) 30% (D) 40% (E) 50%
- 11. If the area of a triangle is 24 and its base is 6, what is the length of the altitude to that base?  
 (A) 3 (B) 6 (C) 8 (D) 10 (E) unknown
- 12. Lenny's average score after 3 tests is 88. What score on the 4th test would bring Lenny's average up to exactly 90?  
 (A) 92 (B) 93 (C) 94 (D) 95 (E) 96
- 13. If an integer is divisible by 6 and by 9, then the integer must be divisible by which of the following?  
 A. 12  
 B. 18  
 C. 24  
 D. 36  
 E. 54
- 14. If Jeff and Jimmy have less than 22 dollars between them, and Jeff has 8 dollars, which of the following could be the number of dollars that Jimmy has?  
 I. 12 II. 14 III. 16  
 A. I only  
 B. III only  
 C. I & III.  
 D. I & II  
 E. Neither I, II, nor III are correct
- 15. Stephanie drove at an average rate of 50 miles per hour for two hours and then increased her average rate by 50% for the next 3 hours. Her average rate of speed for the 5 hours was  $t$  miles per hour. What is the value of  $t$ ?  
 A. 55 mph  
 B. 60 mph  
 C. 65 mph  
 D. 70 mph  
 E. 75 mph
- 16. If  $1 \alpha = 2 \beta$  and  $1 \beta = 3 \gamma$ , how many alphas are equal to 36 gammas?  
 A. 6  
 B. 12

- C. 36
- D. 72
- E. 108

- 17. Price of One Pack Projected Number of Packs Sold
  - \$0.75 10,000
  - \$0.80 9,000
  - \$0.85 8,000
  - \$0.90 7,000
  - \$0.95 6,000
  - \$1.00 5,000
- The chart above describes how many packs of gum a company expects to sell at a number of possible prices per pack. Which of the following equations best describes the relationship shown in the chart, where n indicates the number of packs sold and p represents the price in dollars of one pack?
  - A.  $n = -20,000p - 25,000$
  - B.  $n = -20,000p + 25,000$
  - C.  $n = -200p - 250$
  - D.  $n = 200p + 250$
  - E.  $n = 20,000p - 25,000$
- 18. What is the average of the first 50 positive integers?
  - A. 25
  - B. 25.5
  - C. 26
  - D. 26.5
  - E. 27
- 19. At Joes Steakhouse the hourly wage for a chef is 20% greater than that of a dishwasher, and the hourly wage of a dishwasher is half as much as the hourly wage of a manager. If a managers wage is \$8.50 per hour, how much less than a manager does a chef earn each hour?
  - A. \$5.95
  - B. \$4.25
  - C. \$5.10
  - D. \$3.25
  - E. \$3.40
- 20. A florist buys roses at \$0.50 a piece and sells them for \$1.00 a piece. If there are no other expenses, how many roses must be sold in order to make a profit of \$300?
  - A. 100
  - B. 150
  - C. 200
  - D. 300
  - E. 600

- 21. A certain pump can drain a full 375-gallon tank in 15 minutes. At this rate, how many more minutes would it take to drain a full 600-gallon tank?  
 (A) 9 (B) 15 (C) 18 (D) 24 (E) 25
- 22. If  $n$  is an even integer, which of the following must be an odd integer?  
 (A)  $3n-2$  (B)  $3(n+1)$  (C)  $n-2$  (D)  $n/3$  (E)  $n^2$
- 23. Cindy has a collection of 80 records. If 40 percent of her records are jazz records, and the rest are blues records, how many blues records does she have?  
 (A) 32  
 (B) 40  
 (C) 42  
 (D) 48  
 (E) 50
- 24. Express 2,750,389 in scientific notation.  
 (A)  $27.50389 \times 10^5$   
 (B)  $275.0389 \times 10^3$   
 (C)  $27.50389 \times 10^6$   
 (D)  $0.2750389 \times 10^7$   
 (E)  $2.750389 \times 10^6$
- 25. A rectangle and a triangle have equal areas. The length of the rectangle is 12 inches, and its width is 8 inches. If the base of the triangle is 32 inches, what is the length, in inches, of the altitude drawn to the base?  
 (A) 6  
 (B) 8  
 (C) 9  
 (D) 12  
 (E) 16
- 26. If  $A$  is the set of values of  $x$  at which  $F(x)=0$ , and  $B$  is the set of values of  $x$  at which  $g(x)=0$ , what can you say about the set of values of  $x$  at which  $f(x)g(x)=0$ ?  
 (A) It is the intersection of  $A$  and  $B$ .  
 (B) It is the union of  $A$  and  $B$ .  
 (C) It is a proper subset of the union of  $A$  and  $B$ .  
 (D) It is the Cartesian product of  $A$  and  $B$ .
- 27. Evaluate the following expressions:  
 (A)  $4! =$   
 (B)  $5! * 5! =$   
 (C)  $3! * 0! =$   
 (D)  $4! / 0! =$   
 (E)  $6! / (2! * 4!) =$
- 28. The present age of a father is 3 years more than three times the age of his son. Three years hence, father's age will be 10 years more than twice the age of the son. Find the present age of the father.
- 29. One year ago the ratio of Ramu & Somu age was 6:7 respectively. Four years hence their ratio would become 7:8. How old is Somu.

- 30. The length of a running train is 30% more than the length of another train B running in the opposite direction. To find out the speed of train B, which of the following information given in the statements P & Q is sufficient?.
  - P : The speed of train A is 80 kmph
  - Q : They took 90 sec to cross each other
  - A. Either P & Q is sufficient
  - B. Both P & Q are not sufficient
  - C. only Q is sufficient
  - D. Both P & Q are needed
- 31. Pointing to a photograph, a man said, "I have no brother or sister but that man's father is my father's son." Whose photograph was it?
- 32. One day Jack left home and cycled 10 km southwards, turned right and cycled 5 km and turned right and cycled 10 km and turned left and cycled 10 km. How many kilometers will he have to cycle to reach the home straight?
- 33-35) Each of the four friends Ms A, Mr. B, Ms C and Mr. D vacationed at one of the four places (each person vacationed at only one place) – Japan, Nepal, Egypt and Spain (not necessarily in this order). Each visited the places in one of the following months: January, March, May and November, and everyone went in a different month.
- i. C vacationed immediately before A but after the man who went for a vacation to Japan.  
ii. The person who left in March did not go to Egypt and his friend vacationed in May.  
iii. The person who went to Nepal vacationed immediately after D did.  
iv. A and B visited the friend, who went to Spain, to see his pictures.
- 33. Where did Ms C spend her vacations?  
a. Japan  
b. Nepal  
c. Egypt  
d. Spain  
e. Cannot be determined
- 34. Who vacationed in the month of March?  
a. Ms A  
b. Mr B  
c. Ms C  
d. Mr D  
e. Both Mr. B and Mr. C
- 35. Nepal was vacationed in which month?  
a. Jan.  
b. Mar.  
c. May  
d. Nov.  
e. Feb
- Contributor Name : Karthikeyan N.

#### ROUND 1: WRITTEN TEST

- NO REASONING
- NO VERBAL
- ONLY SIMPLE APTITUDE QUESTIONS WITH NEGATIVE MARKING (1 mark for 3 wrong answers)
- 35 QUESTIONS - 80 MIN

I heard it to be 1hr but we were facilitated with a bonus of another 20 min that day! TCS is now using a database for written tests called TOUCH STONE. It consists of around 2.5 to 3 lakh questions probably of a finite set of models. Thus the data may change but the models will be same. SO, my sincere advice is: refer the TCS old papers from this site during your preparation.

It will help you a lot.

I could not remember the questions exactly but I assure you the model is the same.

Note: All the questions in the actual test will be preceded by lot of unnecessary data to confuse you.

I am posting only the main part of each problem

Q.1 There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160 in tank B. (At the end of first hour, B has 10 liters, second hour it has 20 liters and so on). If tank B is  $\frac{1}{32}$  filled of the 21 hours, what is total duration of hours required to fill it completely?

a) 26 B)25 c)5 d)27

Solution: for every hour water in tank in B is doubled, Let the duration to fill the tank B is x hours.  $\frac{x}{32}$  part of water in tank of B is filled in 21 hours,

Next hour it is doubled so,  $2^*(\frac{x}{32})$  part i.e  $(\frac{x}{16})$  part is filled in 22 hours, Similarly  $(\frac{x}{8})$  th part in 23 hours,  $(\frac{x}{4})$ th part is filled in 24 hours,

$(\frac{x}{2})$  th part is filled in 25 hours,  $(x)$  th part is filled in 26 hours So answer is 26 hours.

Q.2 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. Hence the current average age has become 45. Find the age of seventh person?

a) 43 b) 69 c) 52 d) 31

Solution: Total age of 6 persons is x hours, after two years total age of 6 persons is  $x+12$  Average age of 6 persons is after two years is 43

So  $(x+12)/6=43$ , then solve x,

After 7th person is added then  $(x+7\text{th person age})/7=45$

So we will get 7th person age easily

Q.3 A man travels from A to B at 4 mph over a certain journey and returns over the same route to A, at 5 mph. What is his average speed for the journey?

Solution: Average speed= $(2*x*y)/(x+y)$

Q.4 A toy train produces 10 different sounds when it moves around a circular toy track of radius 5 m at 10 m per min. However, the toy train is defective and it now produces only 2 different tunes at random. What are the odds that the train produces for consecutive music tones of the

same type?

- a) 1 in 16 B) 1 in 4 c) 1 in 8 d) 1 in 32

Solution: Initially it produces 10 sounds and the defect came and now it produces only 2 different sounds and consecutively so there are totally 2 sounds and we have to select on sound and the probability is  $\frac{1}{2}$  and it produces the same sound consecutively for 2 times so the probability becomes  $\frac{1}{2} \times \frac{1}{2}$  ie  $\frac{1}{4}$

Q.5 A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he travelled 1 mile in north direction & reached at North Pole. There he saw a bear. He then followed the bear around 1 hr with a speed of 2 km/hr in east direction. After that he travelled in south direction & reached at his lab in 2 hrs. Then what is the color of the bear?

- a) White b) Black c) Gray d) Brown

Solution: White. all the above matter is nonsense.

Q.6 Usha bought a linen cloth and rope to build a tent. If the rope is 153 m long and it is to be cut into pieces of 1m length, then how many cuts are to be made to cut the ropes into 153 pieces?

- a) 153 b) 152 c) 154 d) 155

Solution: to make it 153 pieces we have to cut 152 times so obviously after last cut we got 153rd piece

Q.7 1. 10 men and 10 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa?

- a) 22 b) 20 c) 10 d) never

Solution: NEVER

Q.8 20 people are there, they are shaking hands together, how many hand shakes possible, if they are in no pair of cyclic sequence.

- a) 19 b) 21 c) 28 d) 7

Solution: answer is 19

For this type of problem answer will be  $n-1$ . but this formula will vary if cyclic sequence is allowed..

Q.9 there are some cycles and 4 wheeler cars. on tue there are 190 wheels. then how many cycles are there on that spot?

Solution: check from options. multiply each and every option with 2 and subtract result from 190. if the obtained result is exactly divisible by 4, that will be the correct answer

Q.10 A father had three children. He had 7 pennies. How can he equally distribute the fruits among his children if

A watermelon costs 1 penny,

2 oranges cost 1 penny and

3 grapes cost 1 penny

- a) 2 melons, 1 orange, 1 grape b) 2 melons, 2 orange, 1 grape c) 1 melons, 2 orange, 1 grape.

Solution: if he buys grapes with 1 penny, he can distribute 1 grape each equally as there are 3 grapes. then he has 6 pennies left with him so with 3 pennies he will buy 6 oranges and distribute 2 each. with other 3 rupees he can buy 3 watermelons and distribute one each therefore, Answer is: 1 watermelon, 2 oranges and 3 grapes

Q.11 The age of the two friends were in the ratio of 6:5. If the sum of their ages is 55. Then after how many years their ratio will become 8:7?

- a) 11 b) 7 c) 10 d) 12

Solution:  $6x+5x=55$ , so  $x=5$ , put first ratio after substitution is  $(6*5)/(5*5)$  and second ratio is  $40/35$  So difference in numerators  $40-30=10$  years

Q.12 A horse chases a pony 2 hours after the pony runs. Horse takes 3 hours to reach the pony. If the average speed of the horse is 81 Km/h. Then what is the average speed of the pony?

- a) 46.4 b) 51 c) 53.4 d) 48.6

Solution: Horse takes 3 hours to cover the distance. Pony takes  $3+2=5$  hours to cover the same distance, Velocity = distance/time, distance travelled by them is equal it is  $81*3=243$  km, speed of pony =  $243/5=48.6$

Q.13 All 32 points are equidistant from a point X on a plane then which is true:

- a) all 32 lie on a circle
- b) distance from X to all 32 is less than distance between each other

Solution option: a

Q.13 Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success. Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.

- a) 20.72 b) 3.5 c) 238.25 d) 6.18

Solution: Speed of Ferrari =  $4*35=140$ , time = distance/velocity,

Q.14 1 ) A circular dartboard of radius 1 foot is at a distance of 20 feet from you. You throw a dart at it and it hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

- 0.75
- 1
- 0.5
- 0.25

Solution: 0.25

Q.15 For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A's chances of winning. Let's assume such rumors to be true and that in

a match between Ghana and Bolivia, Ghana the stronger team has a probability of  $2/3$  of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?

- 4/9
- 2/3
- 1/9
- 5/9

Answer is: 5/9

Q.16 The citizens of planet nigiet are 8 fingered and have thus developed their decimal system in base 8. A certain street in nigiet contains 1000 (in base buildings numbered 1 to 1000. How many 3s are used in numbering these buildings?

- 256
- 54
- 192
- 64

Answer is: 192

Q.17 36 people  $\{a_1, a_2, \dots, a_{36}\}$  meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs,  $\{a_1, a_2\}, \{a_2, a_3\}, \dots, \{a_{35}, a_{36}\}, \{a_{36}, a_1\}$ . Then size of the smallest set of people such that the rest have shaken hands with at least one person in the set is

- 12
- 13
- 18
- 11

Answer is: 11

Q.18 Given 3 lines in the plane such that the points of intersection form a triangle with sides of length 20, 20 and 30, the number of points equidistant from all the 3 lines is

- 4
- 3
- 0
- 1

Answer is: 4

Q.19 Alok and Bhanu play the following min-max game. Given the expression  $N=9+X+Y-Z$  where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be

- 27
- 18
- 20

Answer is: 20

Q.20 Alice has no winning strategy. 34 people attend a party. 4 men are single and the rest are there with their wives. There are no children in the party. In all 22 women are present. Then the number of married men at the party is

12

8

16

Answer is: 8

Q.No:21 Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line; i.e. the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The maximum value of  $n_1(P)$  over all configurations P of 19 points in the plane is

18

9

3

Q.No:22 15. Alice and Bob play the following chip-off-the-table game. Given a pile of 58 chips, Alice first picks at least one chip but not all the chips. In subsequent turns, a player picks at least one chip but no more than the number picked on the previous turn by the opponent. The player to pick the last chip wins. Which of the following is true?

In order to win, Alice should pick 14 chips on her first turn.

In order to win, Alice should pick two chips on her first turn.

In order to win, Alice should pick one chip on her first turn. .... I could not solve this

Q.No:23 After the typist writes 12 letters and addresses 12 envelopes, she inserts the letters randomly into the envelopes (1 letter per envelope). What is the probability that exactly 1 letter is inserted in an improper envelope?

0

12/212

11/12

1/12 (answer is 0.)

Q.No:24. 10 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true?

A. All suspects are lying or the leftmost suspect is innocent.

B. All suspects are lying and the leftmost suspect is innocent .

A only

Neither A nor B

Both A and B

B only

Answer is: A

Q.No:25. Alchemy is an occult tradition that arose in the ancient Persian empire. Zosimos of Panopolis was an early alchemist. Zara, reads about Zosimos and decides to try some experiments. One day, she collects two buckets, the first containing one litre of ink and the second containing one litre of cola. Suppose she takes one cup of ink out of the first bucket and pours it into the second bucket. After mixing she takes one cup of the mixture from the second bucket and pours it back into the first bucket. Which one of the following statements holds now?

- a. There is more cola in the first bucket than ink in the second bucket.
- B. There is as much cola in the first bucket as there is ink in the second bucket.
- c. There is less cola in the first bucket than ink in the second bucket.

Answer is: a

Q.No:26. Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line; i.e. the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The maximum value of  $n_1(P)$  over all configurations P of 19 points in the plane is

18

9

3

I could not solve this.

Q.No:27 (1/2) of a number is 3 more than the (1/6) of the same number?

- a) 6 b) 7 c) 8 d) 9

Solution: Let the number be x,

$$((1/2)*x)=3+(1/6)*x,$$

Then solve x

Q.No:28. 3 persons a,b,c were there A always says truth,B lies on Monday,tusday,& Wednesday.but C lies on thrusday,Friday & saturday .one day A said"that B & C said to A that" B said "yesterday way one of the days when I lies",C said that"yesterday way one of the days when I lies too".then which day was that?

- a) Sunday b) Thursday c) Saturday d) Tuesday

Q.No:29. Which is the smallest no which divides 2880 and gives a perfect square?

- a) 4 b) 9 c) 3 d) 5

Q.No:30. 10 programers, type 10 lines with in 10 minutes then 60lines can type within 60 minutes. How many programmers are needed?

- a) 16 b) 6 c) 10 d) 60

Ans: 10

Q.No:31 to 33 2 to 3 questions of the same type above(q.29) were given like 12 monkeys eat 12 bananas in 12 min.then how many monkeys can eat 72 bananas in 72 min so on.

Guys since there is negative marking try not to make guesses. Cut off for selection may vary between 15-21 depending on your college and the situation. (It may also vary among different branches)

I am not sure about the cutoff at our college but I answered 21 questions correctly and cleared

the written test.

One of my friends who answered only 15 questions was also selected.

Getting prepared for the written test by referring all old papers of the new test pattern is more than enough to crack this test..

## ROUND 2: TECHNICAL INTERVIEW:

In order to get through technical interview, it's better to revise basics of all subjects. Only basic concepts will be asked.

IT'S HARD TO GET THROUGH THIS UNLESS WE ARE CONFIDENT ABOUT WHAT WE SPEAK!!

They check our attitude!!

Even if you do not know the answer, do not get nervous. It's a minor issue.

There was one interviewer per panel. The interviewer was very friendly. I did not feel tensed. I spoke very confidently as if I was speaking to a very familiar person!!  
(With a cute smile on my face throughout the interview!!)

Questions posed to me are:

1. Tell me about yourself?
  2. Which languages are you familiar with?
  3. Rate urself for each subject.
  4. What is a semaphore?
  5. What is diff between CPP and Java?
  6. What is static void in Java's main statement?
  7. Who will initialize the objects in Java?
- (I said wrong answer:-"compiler" but interviewer corrected it & said that the correct answer is Java Virtual Machine)
8. Some other question (I could not remember the ques)..!
  - I do not know the answer for that and said the same to him..
  9. Why TCS?
  10. Given an opportunity how will you see urself in the next 5 yrs?

That's it.. I was very confident about my performance and came out with a smiling face. As it was already 7.30 pm within a few minutes I was directed to M.R interview panel

## ROUND 3: M.R

I entered the room with the same confidence.. again there was only one interviewer in the panel!

Me: Good Evening Sir

Interviewer: Good Evening! How was ur day today?

Me: some what uncomfortable due to the heavy rain sir..:)

I: You might be familiar with the questions being asked here. by discussing experiences from ur frnds outside..u people are faster than the WWW.

Me: Yes sir(smiling)!!

I: so what are the questions that you gathered?

Me: why TCS? why CSE? only these two sir..every one are saying these two only!!

I: so I am not going to ask them again bcoz u might b ready with well prepared answer

Me: yes sir fine..I am ready to face any ques..

I: k.good what is ur weakness?

-----  
Based on my weakness(sleeping) i was given a situation and was asked how i'll come out of that.  
Answered that and I was asked to leave.

#### ROUND 4: H.R

I was asked only a few questions:

- 1.Are you familiar with the TCS 2yr bond?
- 2.Willing to work any where in india?
- 3.How can u manage ur team if there are any controversies?  
(this was asked bcoz i mentioned in resume that i can do team work efficiently)
- 4.Do you have any questions to ask?

One mistake i did in all the three interview rounds is i sat in the chair even before i was asked to sit!!! Results were announced the next day!! My Name was announced first among others in our department!!! I felt very happy to be a part of TCS. 268 from our college were selected. We shouted to the roofs that evening!!

GUYS refer old papers; prepare the basic topics from each and every subject. IMPORTANT AMONG ALL SPEAK CONFIDENTLY! THE MORE CONFIDENT YOU ARE THE MORE WILL BE THE CHANCE OF GETTING SELECTED. MEET U IN TCS ALL THE BEST!

Exam/Interview Date : 19-Nov-2010

No of Rounds : Aptitude Test, Technical Round-1

Contributor Name : HIRANMAYI

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TCS Campus Recruitment Placement Paper at GMRIT Engineering College, Rajam (Aptitude,  
Technical & Interview)

Company Name : TCS

Type : Fresher, Job Interview

Hi, I am Praneetha from GMRIT Engineering College, Rajam for our college TCS visited on 2nd Dec 2010, I remember some questions that I posted here.

Questions:

1. (1/2) of a number is 3 more than the (1/6) of the same number?

a) 6 b)7 c)8 d)9

2.There are two pipes A and B. If A filled 10 liters in an hour, B can fill 20 liters in same time.  
Likewise B can fill 10, 20, 40, 80, 160..... If B filled in 1/16 of a tank in 3 hours, how much  
time will it take to fill the tank completely?

a) 9 B)8 c)7 d)6

3.6 persons standing in queue with different age group, after two years their average age will be  
43 and seventh person joined with them. Hence the current average age has become 45. Find the  
age of seventh person?

a) 43 b)69 c)52 d)31

4. In the reading room of a library, there are 10 tables, 4 chairs per table. In each table there are different numbers of people seated. How many ways they will sit in the library so that no chair would be blank?

a) 8 b) 6 c) 2 d) 7

5. A man jogs at 6 mph over a certain journey and walks over the same route at 4 mph. What is his average speed for the journey?

a) 2.4 mph b) 4.8 mph c) 4 mph d) 5 mph

6. A boy wants to make cuboids of dimension 5m, 6m and 7m from small cubes of .03 m<sup>3</sup>. Later he realized he can make same cuboids by making it hollow. Then it takes some cubes less. What is the number of the cubes to be removed?

a) 2000 b) 5000 c) 3000 d) 7000

7.  $x/2y = 2a$ , then  $2x/x-2ay=?$

a) 4 b) 8 c) 16 d) 2

8. A lady has fine gloves and hats in her closet- 18 blue, 32 red, and 25 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

a) 50 b) 8 c) 60 d) 42

9. On planet korba, a solar blast has melted the ice caps on its equator. 9 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of circle, and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4*W(t-9)$  for  $t \geq 9$  where  $d$  represents the diameter in mm and  $t$  the number of years since the solar blast. Jagan recorded the radius of some echina at a particular spot as 7mm. How many years back did the solar blast occur?

a) 17 b) 21.25 c) 12.25 d) 14.05

10. In T.Nagar the building were numbered from 1 to 100. Then how many 4's will be present in the numbers?

a) 18 b) 19 c) 20 d) 21

11. Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success. Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.

a) 20.72 b) 5.18 c) 238.25 d) 6.18

12. A sheet of paper has statements numbered from 1 to 70. For all values of  $n$  from 1 to 70.

Statement n says ' At least n of the statements on this sheet are false. 'Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The odd numbered statements are true and the even numbered are false.
- c) The first 35 statements are true and the last 35 are false.
- d) The first 35 statements are false and the last 35 are true.

13.If a and b are mixed in 3:5 ration and b and c are mixed in 8:5 ration if the final mixture is 35 liters, find the amount of b?

- A) 13.34
- b) 15.73
- c) 16.73
- d) 9.45

14. One man want to build a wall .The length and breadth of the wall are 20 and 30 respectively. He need 35 bricks for one square centimeter then how many bricks he need?

- a)21,500
- b)30,000
- c)21,000
- d)20,000

15. One grand father has 3 grand children two of the age difference is 3. Eldest child age is 3 times the youngest child's age and the eldest child age is two years more than the sum of other two children. Find what is the age of the elders child?

- a)18
- b)22
- c)30
- d)10

16. 3 persons a,b,c were there A always says truth,B lies on Monday,tuesday,& Wednesday.but C lies on Thursday,Friday & Saturday .one day A said"that B & C said to A that" B said "yesterday way one of the days when I lies",C said that"yesterday way one of the days when I lies too".then which day was that?

- a) Sunday
- b) Thursday
- c) Saturday
- d) Tuesday

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### Latest TCS Fresher Job Interview Paper Pattern 27, December 2010

Company Name: TCS

Type: Fresher, Job Interview.

Hi Friends, This is Santanu Karmakar from Bengal Institute Of Technology. I will give you TCS placement paper format that held on 27 Dec, 2010 on Tecno India Campus. Remember this is on campus review. The exam was Started at 3 pm, Given min.=80 Questions 35

If you want to get a job please do attention on your aptitude papers. Follow the steps that will helpful.

Ques 1: There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160.....in tank B.  $\frac{1}{8}$  th of the tank B is filled in 22 hours. What is the time to fill the tank fully?

- a) 26
- (b) 25
- (c) 5
- (d) 27

Ans:  $22 + \log_2 8 = 22 + 4 = 26$

Note: The question arise more than 1 time.

Ques 2: A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says 'At least n of the statements on this sheet are false.' Which statements are true and which are false?

- (a) The even numbered statements are true and the odd numbered are false.
- (b) The odd numbered statements are true and the even numbered are false.
- (c) The first 35 statements are true and the last 35 are false.
- (d) The first 35 statements are false and the last 35 are true.

Ans. c

Note: For this type of Questions, follow this:

- At least- 1st half are true, Last half are false
- Exactly- Last second one is true or  $(N-1)$ th Statement is true
- Almost- All are true.

Ques 3: Unnecessary data. A lady has fine gloves and hats in her closet- 18 blue- 32 red , 10 white , 25 yellow, 55 purple, 30 orange. The lights are out and it is totally dark in spite of the darkness. She can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color of blue, red, yellow?

- (a) 59
- (b) 8
- (c) 50
- (d) 42

Ans:  $a(32+25+2)$

Note: For this type of questions:

Bigger+Middle+1 (Suppose 18, 32, 25 = $32+25+1$ ), If you do not find answer in options, choose the one closer those the answer you got.

Ques4: The IT giant Tirnop has recently crossed a head count of 150000 and earnings of \$7 billion. As one of the forerunners in the technology front, Tirnop continues to lead the way in products and services in India. At Tirnop, all programmers are equal in every respect. They receive identical salaries and also write code at the same rate. Suppose 12 such programmers take 12 minutes to write 12 lines of code in total. How long will it take 72 programmers to write 72 lines of code in total?

For this type question you should follow d step of basic math that will helpful you get enough time from that.

$$\begin{aligned} & 12 \text{ prog } 12 \text{ line } 12 \text{ min} \\ & 1 \text{ prog } 12 \text{ line } 12*12 \\ & 1 \ 1 \ 12*12/12 \\ & 72 \ 1 \ 12*12/(12*72) \\ & 72 \ 72 \ 12*12*72/(12*72) \end{aligned}$$

Ans:12

Note: This question appears 3 times in our question but app is different please follow basic rule think it it is very very easy.

Ques 5: 12 people {a<sub>1</sub>, a<sub>2</sub>, ..., a<sub>12</sub>} meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs, {a<sub>1</sub>, a<sub>2</sub>}, {a<sub>2</sub>, a<sub>3</sub>}, ..., {a<sub>11</sub>, a<sub>12</sub>}, {a<sub>12</sub>, a<sub>1</sub>}. Then size of the smallest set of people such that the rest have shaken hands with at least one person in the set is

- (a) 12
- (b) 4
- (c) 18
- (d) 11

Ans. B (N/3)

Ques 6: 10 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true?

- A. All suspects are lying.
- B. leftmost suspect is innocent.
- C. leftmost suspect is guilty
- (a) A only
- (b) A or C
- (c) A or B
- (d) B only

Ans. c

Note: Remember it I don't know the logic

Ques 7: Alok and Bhanu play the following min-max game. Given the expression N = 15 + X\*(Y - Z) Where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be?

Ans. 15+18=33

Note: For this type of questions:

$$\begin{aligned}x+y-z &= 11 \\x-y-z &= 2 \\x*(y+z) &= 18\end{aligned}$$

Ques 8: How many four digit numbers can be formed using the digits 1, 2, 3, 4, 5 (but with repetition) that are divisible by 4? Can you help Alok find the answer?

- (a) 100
- (b) 125
- (c) 75
- (d) 85

Ans.:  $5^n - 1 = 5^4 - 1 = 125$ , n= no of digits

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Aptitude Test:

Please refer R.S. Aggarwal book for topics like problems on ages , chain rule ,percentage, profit & loss, chain rule, time & work, boat & streams, clock, odd man out series. Try to solve all problems. It will definitely helpful to you.

TCS has one software “touchstone” for conducting test . It is having collection of around 1 to 2 lacks questions. So pattern of all questions are much same. So please first of all understand pattern of each company.

There are total 35 questions and 80 min. But questions are consist of very useless data , so it is our job to remove all stuff and jus extract imp info for solving the problem.

I am giving you some of question which I remember .

1. (1/2) of a number is 3 more than the (1/6) of the same number?

- a) 6
- b) 7
- c) 8
- d) 9

2. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40,80, 160..in tank B. (At the end of first hour, B has 10 liters, second hour it has 20 liters and so on). If tank B is 1/32 filled of the 21 hours, what is total duration of hours required to fill it completely?

- a) 26
- B) 25
- c) 5
- d) 27

3. Smita was making a cube with dimensions 5\*5\*5 using 1\*1\*1 cubes. What is the number of cubes needed to make a hollow cube looking of the same shape?

- a) 98
- b) 104
- c) 100
- d) 61

4. A lady has fine gloves and hats in her closet- 25blue, 7 red, and 9 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

5. A game is played between 2 players and one player is declared as winner. All the winners from first round are played in second round. All the winners from second round are played in third round and so on. If 8 rounds are played to declare only one player as winner, how many players are played in first round?

- a) 256
- b) 512
- c) 64
- d) 128

6. 1. There is 7 friends (A1, A2, A3....A7).If A1 have to have shake with all without repeat. How

many handshakes possible?

- a) 6
- b) 21
- c) 28
- d) 7

7. On planet korba, a solar blast has melted the ice caps on its equator. 9 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of circle, and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4\sqrt{t-9}$  for  $t \geq 9$  where d represents the diameter in mm and t the number of years since the solar blast. Jagan recorded the radius of some echina at a particular spot as 7mm. How many years back did the solar blast occur?

- a) 17
- b) 21.25
- c) 12.25
- d) 14.05

8. Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.

- a) 20.72
- b) 5.18
- c) 238.25
- d) 6.18

9. A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says ' At least n of the statements on this sheet are false. 'Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The odd numbered statements are true and the even numbered are false.
- c) The first 35 statements are true and the last 35 are false.
- d) The first 35 statements are false and the last 35 are true.

10. 3 persons a, b ,c were there A always says truth lies on Monday, Tuesday,& Wednesday. but C lies on thrusday, Friday & Saturday .one day A said" that B & C said to A that" B said "yesterday way one of the days when I lies", C said that" yesterday way one of the days when I lies too". then which day was that?

- a) Sunday
- b) Thursday
- c) Saturday
- d) Tuesday

11. By using 1,2,3,4,5, how many 5 digit no. can be formed which is divisible by 4, repetition of no. is allowed??

12. Alice and Bob play the following coins-on-a-stack game. 20 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack. Alice starts and the players take turns. A turn consists of moving the coin on the top to a position  $i$  below the top coin ( $0 \leq i \leq 20$ ). We will call this an  $i$ -move (thus a 0-move implies doing nothing). The proviso is that an  $i$ -move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coins the third coin from the top. Then:-

- A) In order to win, Alice's first move should be a 0-move.
- B) In order to win, Alice's first move can be a 0-move or a 1-move.
- C) In order to win, Alice's first move should be a 1-move.
- D) Alice has no winning strategy.

13. For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A's chances of winning. Let's assume such rumors to be true and that in a match between Ghana and Bolivia, Ghana the stronger team has a probability of  $2/3$  of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?

- A)  $4/9$
- B)  $1/9$
- C)  $2/3$
- D)  $5/3$

14. Alok and Bhanu play the following min-max game. Given the expression  $N = 9 + X + Y - Z$  where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be

15. 10 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true?

- A. All suspects are lying or the leftmost suspect is innocent.
- B. All suspects are lying and the leftmost suspect is innocent .
- A) B only
- B) Neither A nor B
- C) A only
- D) Both A and B

16. The IT giant TIRNOP has recently crossed a head count of 150000 and earnings of \$7 billion. As one of the forerunners in the technology front, TIRNOP continues to lead the way in products and services in India. At TIRNOP, all programmers are equal in every respect. They receive identical salaries and also write code at the same rate. Suppose 12 such programmers take 12 minutes to write 12 lines of code in total. How long will it take 72 programmers to write 72 lines of code in total?

17. There are two boxes, one containing 10 red balls and the other containing 10 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is

There are some problems are same type. Then result come out , n my name was in selected list . Then HR give me one form to fill and told to wait. Then I get call for technical interview .

#### Technical Interview:

Sir: Rucha , what you did in new year party?

Me: told

Sir: tell me which is your favorite subject?

Me: told

Sir: tell me about your project.

Me: told

Then he start asking me all about computer networking. Then again switch to DBMS den ask some on OS , command of UNIX OS

I give some correct and some wrong answers.

and last he said m done from my side , do you have any queries ? I told no sir. he ask me to go.

Tip: always have “SMILE “on your face.

#### HR Interview :

It was jus a formality .they ask me about bond n relocation, said yes to both..

Then ask tell me about your self, as usual question.

Here I done with my HR interview.

Then he ask all student to wait for result , mean while they give presentation about TCS. and lastly they announce result's my name was in that. that was happiest day in my life.

So study hard , do Smart work, trust yourself.

Best of Luck Guys.

Exam/Interview Date: 03, Jan 2011.

No of Rounds: Aptitude Test, Technical Interview, HR Interview.

Contributor Name: Rucha Pimparkar

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#### Latest TCS Fresher Job Interview Paper Pattern 14, December 2010

Company Name: TCS

Type: Fresher, Job Interview

Status: Selected

Venue: CVR College of Engineering, IBP.

Placement Date: 14, December 2010.

Hi Friends first of all thanks for every one for supporting me in getting placed in TCS.

Selection process:

1. Online touchstone test.
2. Technical interview cum MR.
3. HR

Written Test:

Written test consists of 35 questions 80 mins, previously it is 60 mins but now time they increased 20 mins. It is a online test. Preparation: Up to my knowledge questions for written test is always from previous papers. so first of all solve below patterns mostly all these patterns. Main aim of the written test is to filter the aspirants, so concentrate on the written test i.e. the 1st hurdle of TCS. attempt the question for which you are correct dont give blind guesses. Attempt the question almost solved by you

Pattern 1:

1.  $(1/2)$  of a number is 3 more than the  $(1/6)$  of the same number?  
a) 6 b) 7 c) 8 d) 9

Solution:

Let the number be  $x$ ,

$$((1/2)*x)=3+(1/6)*x,$$

Then solve  $x$

2.  $(1/3)$  of a number is 3 more than the  $(1/6)$  of the same number?  
a) 6 b) 16 c) 18 d) 21

3.  $(1/3)$  of a number is 6 more than the  $(1/6)$  of the same number?  
a) 6 b) 18 c) 36 d) 24

4.  $(2/3)$  of a number is 4 more than the  $(1/6)$  of the same number?  
a) 6 b) 8 c) 36 d) 24

5.  $(1/3)$  of a number is 5 more than the  $(1/6)$  of the same number?  
a) 6 b) 36 c) 30 d) 72

Pattern 2:

1. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160 in tank B. (At the end of first hour, B has 10 liters, second hour it has 20 liters and so on). If tank B is  $1/32$  filled of the 21 hours, what is total duration of hours required to fill it completely?  
a) 26 B) 25 c) 5 d) 27

Solution: for every hour water in tank in B is doubled, Let the duration to fill the tank B is  $x$

hours.  $x/32$  part of water in tank of B is filled in 21 hours, Next hour it is doubled so,  
 $2*(x/32)$  part i.e  $(x/16)$  part is filled in 22 hours,  
Similarly  $(x/8)$ th part in 23 hours,  $(x/4)$ th part is filled in 24 hours,  
 $(x/2)$ th part is filled in 25 hours,  $(x)$ th part is filled in 26 hours  
So answer is 26 hours.

2. There are two pipes A and B. If A filled 10 liters in an hour, B can fill 20 liters in same time.  
Likewise B can fill 10, 20, 40, 80, 160. If B filled in  $1/16$  of a tank in 3 hours, how much time will it take to fill the tank completely?

- a) 9 b) 8 c) 7 d) 6

3. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160.....in tank B.  $1/8$  th of the tank B is filled in 22 hours. What is the time to fill the tank fully?

- a) 26 b) 25 c) 5 d) 27

4. A tank is filled with water. In first hour 10 liters, second hours 20 liters, and third hour 40 liters and so on. If time taken to fill  $\frac{1}{4}$  of the tank if 5 hours. What is the time taken to fill up the tank?

- a) 5 b) 8 c) 7 d) 12.5

5. If a tank A can be filled within 10 hours and tank B can be filled  $\frac{1}{4}$  in 19 hours then, what is the time taken to fill up the tank completely?

- a) 21 b) 38 c) 57 d) 76

### Pattern 3:

1. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. Hence the current average age has become 45. Find the age of seventh person?

- a) 43 b) 69 c) 52 d) 31

Solution:

Total age of 6 persons is  $x$  hours, after two years total age of 6 persons is  $x+12$

Average age of 6 persons is after two years is 43

So  $(x+12)/6=43$ , then solve  $x$ ,

After 7th person is added then  $(x+7\text{th person age})/7=45$

So we will get 7th person age easily

2. In a market 4 men are standing. The average age of the four before 4 years is 45, after some days one man is added and his age is 49. What is the average age of all?

- a) 43 b) 45 c) 47 d) 49

3. In a shopping mall with a staff of 5 members the average age is 45 years. After 5 years a person joined them and the average age is again 45 years. What's the age of 6th person?

- a) 25 b) 20 c) 45 d) 30

4. In a market 4 men are standing .The average age of the four before 2 years is 55, after some days one man is added and his age is 45. What is the average age of all?  
a) 55 b) 54.5 c) 54.6 d) 54.7

Pattern 4:

1. In the reading room of a library, there are 23 reading spots. Each reading spot consists of a round table with 9 chairs placed around it. There are some readers such that in each occupied reading spot there are different numbers of readers. If in all there are 36 readers, how many reading spots do not have even a single reader?

- a) 8 b) none c) 16 d) 15

Solution: 23 reading spots, Each reading spot consists of 9 chairs placed around it so There are some readers such that in each occupied reading spot there are different numbers of readers. For each table different no of persons are sat,so for first table 1 person is sit,2nd table 2 persons are sit 36

readers means(1+2+3+4+5+6+7+8 so 8 tables are filled so  $23-8=15$  reading spots does not have single reader.

2. In the reading room of a library, there are 10 tables, 4 chairs per table. In each table there are different numbers of people seated. How many tables will be left out without at least 1 person?  
a) 8 b) 6 c) 2 d) 7

3. In the reading room of a library, there are 10 tables, 4 chairs per table. In each table there are different numbers of people seated. How many ways they will sit in the library so that no chair would be blank?

- a) 8 b) 6 c) 2 d) 7

Pattern 5:

1. A man jogs at 6 mph over a certain journey and walks over the same route at 4 mph. What is his average speed for the journey?

- a) 2.4 mph b) 4.8 mph c) 4 mph d) 5 mph

Solution: Average speed= $(2*x*y)/(x+y)$

2. A man travels from A to B at 4 mph over a certain journey and returns over the same route to A, at 5 mph. What is his average speed for the journey?

- a) 4.44 mph b) 4.8 mph c) 4.887 mph d) 5 mph

3. A person is rock climbing at an altitude of 800 m. He go up by 7 mph. and come down by 9 mph. what was his average speed?

- a) 7.875 mph b) 7.125 mph c) 7mph d) 7.5 mph

4. Find average speed if a man travels at speed of 24kmph up and 36kmph down at an altitude of 200m?

- a) 28.8 mph b) 27.8 mph c) 27.5mph d) 30 mph

5. Person travels to a hill, if he goes from A to B with speed of 4kmph and returns back to B with speed of 5kmph. What is his average speed of journey?  
a) 4.5kmph b) 4.44kmph c) 9kmph d) 4.245kmph
6. A man travels from A to B at 70 mph over a certain journey and returns over the same route to A, at 80 mph. What is his average speed for the journey?  
a) 74.66 b) 75 c) 74.33 d) 74.99
7. Find average speed if a man travels at speed of 24kmph up and 36kmph down at an altitude of 200m.  
a) 28.8 b) 28 c) 27 d) 28.6

Pattern 6:

1. Susan made a block with small cubes of 8 cubic cm volume to make a block ,3 small cubes long, 9 small cubes wide and 5 small cubes deep. She realizes that she has used more small cubes than she really needed. She realized that she could have glued a fewer number of cubes together to look like a block with same dimensions, if it were made hollow. What is the minimum number of cubes that she needs to make the block?  
a) 114 b) 135 c) 21 d) 71

Solution: I do not know perfectly but I got some solutions from internet I do not know correctly whether it is true or not, $((3*9*5)) - ((3-2)*(9-2)*(5-2))$  so answer is 114.

2. A boy wants to make cuboids of dimension 5m, 6m and 7m from small cubes of .03 m<sup>3</sup>. Later he realized he can make same cuboids by making it hollow. Then it takes some cubes less. What is the number of the cubes to be removed?  
a) 2000 b) 5000 c) 3000 d) 7000
3. Smita was making a cube with dimensions 5\*5\*5 using 1\*1\*1 cubes. What is the number of cubes needed to make a hollow cube looking of the same shape?  
a) 98 b) 104 c) 100 d) 61
4. Leena cut small cubes of 10 cm dimension each. She joined it to make a cuboid of length 100 cm, width 50 cm and depth 50 cm. How many more cubes does she need to make a perfect cube?  
a) 500 b) 250 c) 750 d) 650
5. Leena cut small cubes of 3 cubic cm each. She joined it to make a cuboid of length 10 cm, width 3 cm and depth 3 cm. How many more cubes does she need to make a perfect cube?  
a) 910 b) 250 c) 750 d) 650
6. A lady builds 9cm length, 10cm width,3cm height box using 1 cubic cm cubes. What is the minimum number of cubes required to build the box?  
a) 730 b) 270 c) 720 d) 310

### Pattern 8:

1.  $(40*40*40 - 31*31*31)/(40*40+40*31+31*31) = ?$

- a)8 b)9 c)71 d)51

Solution:  $a^3 - b^3 = (a-b)(a^2 + ab + b^2)$  so from this formula we will find (a-b) value

2.  $(98*98*98 - 73*73*73)/(98*98*98 - 73*73*73) = ?$

- a).171 b).4 c).420 d).415

3.  $(209*144)^2 + (209*209) + (209*144) + (144*144) = ?$

- a)905863729 b)905368729 c)905729368 d)65

### Pattern 9:

1.  $((4x+3y)+(5x+9y))/(5x+5y) = ?$  as  $(x/2y) = 2$

- a)8 b) none c)16 d)15

Solution: substitute  $x=4y$  in above we can find solution

2.  $x/2y = 2a$ , then  $2x/x-2ay = ?$

- a)4 b)8 c)16 d)2

3.  $3X/5Y = 5Y/3X$ .....Find the value of X/Y

- a)3/5 b)5/3 c)2/5 d)5/2

4. What is the value of  $(3X+8Y)/(X-2Y)$ , if  $X/2Y=2$

- a)8 b) none c)10 d)13

5.  $((4x+3y)+(5x+9y))/(5x+5y) = ?$  as  $(x/2y) = 2$

- a)48/5 b)46/5 c)47/5 d)49/5

6.  $((4x+2y)/(4x-2y)) = ?$  as  $(x/2y) = 2$

- a)8/7 b)9/7 c)11/7 d)6/7

### Pattern 10:

1. A girl has to make pizza with different toppings. There are 8 different toppings. In how many ways can she make pizzas with 2 different toppings?

- a) 16 b) 56 c) 112 d) 28

Solution:  $8c2$

2. A pizza shop made pizzas with many flavors. There are 10 different flavors, in that 7 flavors are taken to make pizza. In how many ways they can arrange?

- a) 240 b) 120 c) 65 d) 210

3. A pizza shop made pizzas with many flavors. There are 9 different flavors, in that 2 flavors are taken to make pizza. In how many ways they can arrange?

- a) 16 b) 26 c) 36 d) 46

Pattern 11:

1. 3, 22, 7, 45, 15, ?, 31

- a) 91 b) 151 c) 90 d) 5

2. 8 6 17 14 35 31 75 \_, 143?

3. Inspired by Fibonacci series Sangeet decided to create his own series which is 1, 2, 3, 7, 7, 22, 15, 67, 31, \_, 63?

- a) 202 b) 31 c) 76 d) 49

4. 3, 12, 7, 26, 15, ?

- a) 54 b) 27 c) 108 d) 31

5.  $1! + 2! + \dots + 50! = ?$

- a)  $3.1035 \times 10^{64}$  b)  $2.1021 \times 10^{65}$  c)  $3.1035 \times 10^{63}$  d)  $3.1035 \times 10^{62}$

6. 1, 2, 3, 6, 7, 14, \_, 32?

7. 5, 9, 12, 18, 26, 36, 47, 72, \_?

- a) 75 b) 135 c) 100 d) 55

8. 3, 15, x, 51, 53, 159, 161

- a) 17 b) 34 c) 54 d) 112

Pattern 12:

1. Simple question but big one on average age.sth like a, b, c weighted separately 1st a, b, c ,then a& b, then b & c ,then c & a at last abc, the last weight was 167,then what will be the average weight of the 7 reading?

- a) 95 b) 95.428 c) 95.45 d) 94

Solution: Last weight abc is 167 i.e three persons weight is 167 .in first 6 combinations a,b,c,ab,bc,ac i.e a checked weight for 3 times totally like that band c also so total weight in all 7 combinations is  $(4 \times 167)$

Average is  $(668/7)=95.42$

Pattern 13:

1. A toy train produces 10 different sounds when it moves around a circular toy track of radius 5 m at 10 m per min. However, the toy train is defective and it now produces only 2 different tunes at random. What are the odds that the train produces for consecutive music tones of the same type?

- a) 1 in 16 b) 1 in 4 c) 1 in 8 d) 1 in 32

Solution: Initially it produces 10 sounds and the defect came and now it produces only 2

different sounds and consecutively so there are totally 2 sounds and we have to select on sound and the probability is  $\frac{1}{2}$  and it produces the same sound consecutively for 2 times so the probability becomes  $\frac{1}{2} \times \frac{1}{2}$  ie  $\frac{1}{4}$

2. A car manufacturer produces only red and blue models which come out of the final testing area at random. What are the odds that five consecutive cars of same color will come through the test area at any one time?  
a) 1 in 16 b) 1 in 125 c) 1 in 32 d) 1 in 25

Pattern 15:

1. A triangle is made from a rope. The sides of the triangle are 25 cm, 11 cm and 31 cm. What will be the area of the square made from the same rope?  
a) 280.5625 b) 240.5625 c) 280.125 d) 240

Solution: add all sides  $25+11+31$  to get rope length rope length = 67, rope is made into a square  
So side of square is  $67/4=16.75$  and so area is  $16.75 \times 16.75 = 280.5625$

2. A triangle is made from a rope. The sides of the triangle are 21 cm, 24 cm and 28 cm. What will be the area of the square made from the same rope?  
a) 280.5625 b) 333.0625 c) 333.0125 d) 400

Pattern 16:

1. What is the distance between the z-intercept from the x-intercept in the equation  $ax+by+cz+d=0$

Solution: intercept form equation

2. What is the distance of the z-intercept from the x-intercept in the equation  $ax+by+cz=d$  (I do not remember the values of a, b, c, d).

Pattern 17:

1. A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he travelled 1 mile in north direction & reached at North Pole. There he saw a bear. He then followed the bear around 1 hr with a speed of 2 km/hr in east direction. After that he travelled in south direction & reached at his lab in 2 hrs. Then what is the color of the bear?

a) White b) Black c) Gray d) Brown

Solution: White. above all the matter is nonsense

Pattern 18:

1. Out of 7 children the youngest is boy then find the probability that all the remaining children are boys  
a) 1/64 b) 1/32 c) 1/128 d) 1/256

Pattern 19:

1. Usha bought a linen cloth and rope to build a tent. If the rope is 153 m long and it is to be cut into pieces of 1m length, then how many cuts are to be made to cut the ropes into 153 pieces?  
a)153 b)152 c)154 d)155

Solution: to make it 153 pieces we have to cut 152 times so obviously after last cut we got 153rd piece

2. A person has to make 146 pieces of a long bar. He takes 4 seconds to cut a piece. What is the total time taken by him in seconds to make 146 pieces?

- a) 584 b) 580 c) 730 d) 725

Solution: 146 pieces means 145 cuts so for each cut it takes 4 seconds means total time  
 $145 \times 4 = 580$

3. A person has to make 141 pieces of a long bar. He takes 2 seconds to cut a piece. What is the total time taken by him in seconds to make 141 pieces?

- a) 560 b) 280 c) 112 d) 324

Pattern 20:

1.< Spores of a fungus, called late blight, grow and spread infection rapidly. These pathogens were responsible for the Irish potato famine of the mid-19th century. These seem to have attacked the tomato crops in England this year. The tomato crops have reduced and the price of the crop has risen up. The price has already gone up to \$45 a box from \$27 a box a month ago. How much more would a vegetable vendor need to pay to buy 27 boxes this month over what he would have paid last month?

- a) \$27 b) \$18 c) \$45 d) \$486

Solution: See last 3 lines only answer is  $45 - 27 = 18$

Pattern 21:

1. A Person buys a horse for 15 ponds, after one year he sells it for 20 pounds. After one year, again he buys the same horse at 30 pounds and sells it for 40 pounds. What is the profit for that person?

Solution: here we cannot consider depreciation or decay of item acc to answer so go acc to answer

Totally  $5 + 10 = 15$ \$profit

Pattern 22:

1. John buys a cycle for 31 dollars and given a cheque of amount 35 dollars. Shop Keeper exchanged the cheque with his neighbor and gave change to John. After 2 days, it is known that cheque is bounced. Shop keeper paid the amount to his neighbor. The cost price of cycle is 19

dollars. What is the profit/loss for shop keeper?

- a) loss 23 b) gain 23 c) gain 54 d) Loss 54

Solution: Loss= Change of money given to john(4\$)+actual cycle cost 19\$=23\$ loss

#### Pattern 23:

1. A lady has fine gloves and hats in her closet- 18 blue, 32 red, and 25 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

- a) 50 b) 8 c) 60 d) 42

Solution: I am not able to answer this if i go in procedure way so search in net by searching question. Better see below website

<http://www.m4maths.com/placement-puzzles.php?>

My answered questions may be answered there.

2. A lady has fine gloves and hats in her closet- 14 blue, 20 red, and 18 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

3. A lady has fine gloves and hats in her closet- 13 blue, 27 red, and 40 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

4. A lady has fine gloves and hats in her closet- 25 blue, 7 red, and 9 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

5. A lady has fine gloves and hats in her closet- 26 blue, 30 red, and 56 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

#### Pattern 24:

1. Sangakara and Ponting selects batting by using a dice, but dice is biased. So to resolve, Ponting takes out a coin. What is the probability that coin shows correct option?

- a)1/2 b)1/6 c)1/12 d)6/10

Solution is  $\frac{1}{2}$ .

2. There is a die with 10 faces. It is not known that fair or not. 2 captains want to toss die for batting selection. What is the possible solution among the following?

- a) If no. is odd it is head, if no. is even it is tail
- b) If no. is odd it is tail, if no. is even it is head
- c) Toss a die until all the 10 digits appear on top face. And if first no. in the sequence is odd then consider it as tail. If it is even consider it as head.

Pattern 25:

1. In a family there are some boys and girls. All boys told that they are having equal no of brothers and sisters and girls told that they are having twice the no. of brothers than sisters. How many boys and girls present in a family?
- a) 4 boys and 3 girls b) 3 boys and 4 girls c) 2 boys and 5 girls d) 5 boys and 2 girls

Pattern 26:

1. 10 men and 10 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa?
- a) 22 b) 20 c) 10 d) none
2. There are 100 men and 100 women on the dance floor. They want to dance with each other. Then which of the following statements is always true:
    - a) There are 2 men who danced with equal no. of women's
    - b) There are 2 women who danced with equal no. of men
    - a) both a and b b)only a c)only b d)none

Pattern 27:

1. Middle- earth is a fictional land inhabited by hobbits, elves, dwarves and men. The hobbits and elves are peaceful creatures that prefer slow, silent lives and appreciate nature and art. The dwarves and the men engage in physical games. The game is as follows. A tournament is one where out of the two teams that play a match, the one that loses get eliminated. The matches are played in different rounds, where in every round; half of the teams get eliminated from the tournament. If there are 8 rounds played in knock out tournament, how many matches were played?

a) 257 b) 256 c) 72 d) 255

Solution: Do not know perfect logic 28

2. A game is played between 2 players and one player is declared as winner. All the winners from first round are played in second round. All the winners from second round are played in third round and so on. If 8 rounds are played to declare only one player as winner, how many players are played in first round?

a) 256 b) 512 c) 64 d) 128

Pattern 28:

1. Metal strip of width 'x' cm. 2 metal strips are placed one over the other, then the combine length of 2 strips is 'y'. If 'z' strips are placed in that manner. What is the final width of that arrangement?

2. A, B, C, D, E are there among A, B, C are boys and D, E are girls D is to the left of A and no girl sits at the middle and at the extremes. Then what is the order of their sittings.

Pattern 29:

1. There is 7 friends (A1, A2, A3....A7). If A1 have to have shake with all without repeat. How many handshakes possible?  
a) 6 b) 21 c) 28 d) 7

Solution: For handshakes type question i am confirming you that if there are n members are there

Handshakes are given in linear manner = $n-1$ (last person cannot give hand shake to first person)

Handshakes are given in cyclic manner = $n$ (last person can give hand shake to first person)

But i do not know perfectly for repetition it is  $nc^2$

2. 49 members attended the party. In that 22 are males, 17 are females. The shake hands between males, females, male and female. Total 12 people given shake hands. How many such kinds of such shake hands are possible?

- a) 122 b) 66 c) 48 d) 1 28

Pattern 30:

1. B is taller than j and 3 pillars. P is shorter than B and 2 pillars is j shorter/taller than P?  
a) yes b) no c) may be d) can't find

2. There are 1000 pillars for a temple. 3 friends Linda, Chelsey, Juli visited that temple. (Some unrelated stuff) Linda is taller than Chelsea and taller than 2 of 1000 pillars. Julia is shorter than Linda. Find the correct sentence?

- a) Linda is shorter among them  
b) Chelsea is taller than Julia  
c) Chelsea is shorter than Julia  
d) Cannot determine who is taller among Chelsea and Julia

Pattern 31:

1. Entry ticket to an exhibition ranges from 1p to 31p. You need to provide exact change at the counter. You have 31p coin. In how many parts will u divide 31p so that u will provide the exact change required and carry as less coins as possible?

- a) 4 b) 5 c) 6 d) 7

Solution: in b.tech we studied 8 4 2 1 code for binary system in digital logic proceed in that way for answer it is 16 8 4 2 1 if u add all we will get 31 so 5 coins required

Pattern 32:

1. Peter and Paul are two friends. The sum of their ages is 35 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the present age of Peter?  
a) 8 b) 20 c) 16 d) 15

Pattern 33:

1. 20 men handshake with each other without repetition. What is the total number of handshakes made?  
a) 190 b) 210 c) 150 d) 250
2. 10 people are there, they are shaking hands together, how many hand shakes possible, if they are in no pair of cyclic sequence.  
a) 45 b) 9 c) 12 d) 10

Pattern 34:

1. If there are 2 wheelers and 4 wheelers parked in a school located at the heart of the city, find the number of 4 wheelers parked there if there were 20 two wheelers parked there  
a) 48 b) 50 c) 52 d) 64

Solution: Proceed with answer is best in question they will give total no of wheels

2. If there are 2 wheelers and 4 wheelers parked in a school located at the heart of the city, find the number of 4 wheelers parked there if there were 58 wheels are parked there  
a) 10 b) 33 c) 22 d) none

Pattern 35:

1. A man whose age is 45 yrs has 3 sons named John, Jill, jack. He went to a park weekly twice. He loves his sons very much. On a certain day he found the shop keepers selling different things. An apple cost 1penny, 2chocalate costs 1penny & 3 bananas cost 1 penny. He has bought equal number of apple, chocolate & banana for each son. If the total amount he invest is 7 penny then how many he has bought from each piece for his son?  
a) 1app, 1cho, 1 banana b) 1 app, 2cho, 3 banana c) 1app, 2cho, 1banana

2. One person had three children. He had 7 pennies. Find the distribution of the fruits among the three children. A melon costs 1 penny, 2 oranges cost 1 penny and 3 grapes cost 1 penny  
a) 2 melons, 1 orange, 1 grape b) 2 melons, 2 orange, 1 grape c) 1 melons, 2 orange, 1 grape.

Pattern 36:

- 1) The age of the two friends were in the ration of 6:5. If the sum of their ages is 55. Then after how many years their ratio will become 8:7?  
a) 11 b) 7 c) 10 d) 12

Solution:  $6x+5x=55$ , so  $x=5$ , put first ratio after substitution is  $(6*5)/(5*5)$  and second ratio is  $40/35$  So difference in numerators  $40-30=10$  years

2) The age of the two friends were in the ration of 6:5. If the sum of their ages is 66. Then after how many years their ratio will become 7:6?

- a) 11 b) 6 c) 10 d) 12

3) The age of the two friends were in the ration of 2:3. If the sum of their ages is 55. Then after how many years their ratio will become 4:5?

- a) 11 b) 33 c) 22 d) 44

#### Pattern 37:

1) A volume of 10936 l water is in a container of sphere. How many semisphere of volume 4l each will be required to tranfer all the water into the small semispheres?

- a) 2812 b) 8231 c) 2734 d) 4222

#### Pattern 38:

1) A person is manufacturing a house. He bought 20 ropes of wire which has a density of 300 Kg/m<sup>3</sup>. The height of the building to be constructed is 40 m. If the capacity of the current passed in the wire is 20 A and the voltage capacity is 80 Volts. Then what will be the opposing force to the current if the wire is used?

- a) 2 b) 4 c) 8 d) 1600

Solution: ohms law  $V=IR$ , Opposing force of current is resistance,  $R=v/i$

#### Pattern 39:

1) A horse chases a pony 2 hours after the pony runs. Horse takes 3 hours to reach the pony. If the average speed of the horse is 81Kmph.Then what is the average speed of the pony?

- a) 46.4 b) 51 c) 53.4 d) 48.6

Solution: Horse takes 3 hours to cover the distance

Pony takes  $3+2 =5$  hours to cover the same distance, Velocity=distance/time, distance traveled by them is equal it is  $81*3=243\text{km}$ , speed of pony= $243/5=48.6$

3) A horse chases a pony 3 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 35 kmph, what is the average speed of the pony

#### Pattern 40:

1)The difference between two no is 9 and the product of the two is 14.What is the square of their sum?

- a) 120 b) 130 c) 137 d) 145

Solution:  $a-b=9$ ,  $ab=14$ ,  $(a-b)^2=a^2+b^2-2*a*b$

2) The sum of two no is 5 and the product of the two is 14.What is the sum of their squares?

3) The sum of the squares of two no is 12 and their sum is 15.Find the product of the two no?

Pattern 41:

1) On planet korba, a solar blast has melted the ice caps on its equator. 9 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of circle, and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4*v(t-9)$  for  $t = 9$  where  $d$  represents the diameter in mm and  $t$  the number of years since the solar blast.Jagan recorded the radius of some echina at a particular spot as 7mm. How many years back did the solar blast occur?

- a) 17 b) 21.25 c) 12.25 d) 14.05

Solution: radius =7mm, then diameter  $2*radius$ , substitute diameter the in above equation you will get answer

Pattern 42:

1) A man goes 50Km north , then turned left walked 40Km, then turned right ? In which direction he is?

- a) North b) South c) East d) West

Pattern 43:

1) In T.Nagar the building were numbered from 1 to 100.Then how many 4's will be present in the numbers?

- a) 18 b) 19 c) 20 d) 21.

Solution: You have to count and answer but be prepare with answer

2) In T.Nagar the building were numbered from 1 to 100. Then how many 6's will be present in the numbers?

- a) 18 b) 19 c) 20 d) 21

3) In T.Nagar the building were numbered from 1 to 100. Then how many 1's will be present in the numbers?

- a) 18 b) 19 c) 20 d) 21

4) In T.Nagar the building were numbered from 1 to 100. Then how many 0's will be present in the numbers?

- a) 18 b) 19 c) 20 d) 11

Pattern 44:

- 1) A number when divided by D leaves a remainder of 8 and when divided by 3D leaves a remainder of 21. What is the remainder left, when twice the number is divided by 3D?  
a) 13 b) cannot be determined c) 3 d) 42

Pattern 45:

- 1) Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.

- a) 20.72 b) 3.5 c) 238.25 d) 6.18

Solution: Speed of Ferrari = $4 \times 35 = 140$ , time=distance/velocity,

- 2) Ferrari S.P.A is an Italian sports car manufacturer based in Marane llo, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 46 km/hr and the distance traveled by the Ferrari is 953 km, find the total time taken for Rohit to drive that distance.

- a) 20.72 b) 5.18 c) 238.25 d) 6.18

Pattern 46:

- 1) A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says ' At least n of the statements on this sheet are false. 'Which statements are true and which are false?  
a) The even numbered statements are true and the odd numbered are false.  
b) The odd numbered statements are true and the even numbered are false.  
c) The first 35 statements are true and the last 35 are false.  
d) The first 35 statements are false and the last 35 are true.

Pattern 47:

- 1) A man goes north 37km.turns left goes 2km.turns right goes 17km.turns right goes 2km. find distance b/w starting ending point.  
a) 54 b) 27 c) 81 d) 67

Pattern 48:

- 1) If there are 30 cans out of them one is poisoned if a person tastes very little he will die within 14 hours so if there are mice to test and 24 hours to test, how many mice are required to find the poisoned can?  
a) 3 b) 2 c) 6 d) 1

Pattern 49:

- 1) If a and b are mixed in 3:5 ration and b and c are mixed in 8:5 ration if the final mixture is 35 liters, find the amount of b?  
a) 13.34 b) 15.73 c) 16.73 d) 9.45

Solution: Solve for a:b:c, then b ratio is  $b/(a+b+c)*35$

Pattern 50:

- 1) If we subtract a number with y, we get 4 increase of number, once it got divided by y itself...  
Find that number??  
a) 13 b) 12 c) 14 d) 11

Pattern 51:

- 1) It is the class with the seating arrangement in 4 rows and 8 columns. When the teacher says 'start' the girl who is sitting in first row and first column will say 1, then the next girl sitting behind her will say 4, the next girl sitting behind that girl will say 7, in a particular order each girl is telling a number, the following girls told 10, 13 next turn is yours what u will say?  
a) 15 b) 17 c) 14 d) 16

Solution: It is a series 1, 4, 7, 10, 13.

Pattern 52:

- 1) It is dark in my bedroom and I want to get two socks of the same color from my drawer, which contains 24 red and 24 blue socks. How many socks do I have to take from the drawer to get at least two socks of the same color?  
a) 2 b) 3 c) 48 d) 25
- 2) Lady has 2 select gloves & hat from a basket. In the dark, she can distinguish hat & gloves. 14 red, 20 blue, 18 green are there. Find probability that any selected glove pair has same color.
- 3) A lady had fine gloves and hats. 25 blue, 7 red and 9 gey. She had to select a pair among them. But there was no light so she had to select in darkness the correct pair with a glove and a hat. Therefore how many combinations of same color she can select?

Pattern 53:

- 1) If the Valentine's Day in 2005 falls on Monday, then on which day will the Valentine's Day

fall on 2010?

- a) Saturday b) Thursday c) Wednesday d) Sunday

Pattern 54:

1. A person run from A to B. He took  $\frac{1}{4}$  of the time less to reach B when compare to run at normal Speed. Then how many percentage he has increased his speed?

- a) 40 b) 44.4 c) 33.3 d) 22.2

Solution: i do not know perfectly but i have simple logic,  $1 - \frac{1}{4} = \frac{3}{4}$ , then reverse it so it is  $\frac{4}{3} = 1.333, 1.33 - 1 = 33.33$  like this

2. An athlete decides to run the same distance in  $\frac{1}{4}$ th less time that she usually took. By how much percent will she have to increase her average speed?

- a) 40 b) 44.4 c) 33.3 d) 22.2

Pattern 55:

1. In a building there are 5 rooms. Each having a equal area .The length of the room is 4m and breadth is 5 m. The height of the rooms are 2m. If 17 bricks are needed to make a square meter then how many bricks are needed to make the floor of a particular room?

- a) 320 b) 380 c) 340 d) 300

Solution: area of the room is length\*breadth=4\*5=20m<sup>2</sup>, For one square meter it takes 17 bricks, For 20m<sup>2</sup> total no of bricks are 17\*20=340,

Pattern 56:

1. One man want to build a wall .The length and breadth of the wall are 20 and 30 respectively. He need 35 bricks for one square centimeter then how many bricks he need?

- a) 21,500 b) 30,000 c) 21,000 d) 20,000

Pattern 57:

1. In a hotel we can order two types of verities, but we can make 6 more varieties in home. One can choose the four verities with two from hotel as must. Find how many ways one can order.

- a) 14 b) 15 c) 56 d) 28

Pattern 58:

1. If a pipe can fill the tank within 6hrs.But due to leak it takes 30 min more. Now the tank is full then how much time will it take to empty the tank thought the leak?

- a) 78 b) 56 c) 66 d) 59

Pattern 59:

1. The bacteria has the probability of split into 3 and probability to die is 1/3rd of the total bacteria. Let the probability is P. Some of them survived with probability 1/5. Then which among the following relation is true?

a)  $P=1/3+1/5*3$  b)  $P=1/5*(1/8-3)$

2. There is a bacteria which has the probability of die 1/3 of its total number or it may tripled.

Find out the probability

A.  $P=1/3+(2/3*p^3)$  B.  $P=2/3+(2/3*p^3)$  C.  $P=2/3+(1/3*p^3)$  D  $P=2/3+(2/3*p^3)$

#### Pattern 60:

1. There was a grand mother in a village who had a grand child. Upon asking her grand Childs age she told that she is as older as many days old as her daughters age in weeks and as many days as her own age in years. The sum of the three is 130. then how old is the child.?

#### Pattern 61:

1) In T.Nagar the building were numbered from 1 to 100. Then how many 4's will be present in the numbers?

a) 18 b) 19 c) 20 d) 21

2) In Tnagar many buildings were under residential category. for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many time 6 will appear in building numbering?

#### Pattern 62:

1) Amrith told to Anand in front of a Photo that "He is the son of my father's son". Find who is in the picture if amrith have no brothers and sisters.

a) Amrith himself b) Amrith's Uncle c) Amrith's Father d) Amrith's son

2) One person has no siblings and says, " the guy in the photo is the only son of my father 's son". What is the relation of the guy to the person?

#### Pattern 63:

1) One grand father has 3 grand children two of the age difference is 3. Eldest child age is 3 times the youngest childs age and the eldest child age is two year more than the sum of other two children. Find what is the age of the elders child?

a) 18 b) 22 c) 30 d) 10.

Solution: there are 3 childs, let the age of younger be x, elder be  $3x$ , so the middle one be  $m$ ,  $3x=2+x+m$ , then we have  $a-b=3$  or  $b-c=3$ , or  $a-c=3$ , then for answer we have to go via options, substitute that in above equations

2) One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3

times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

3) One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

Pattern 64:

1) In a school, for a student out of 100 he got 74 of average for 7 subjects and he got 79 marks in the 8th subject. what is the average of all the subject?

- a) 76.251 b) 80.25 c) 74.265 d) 74.625

Solution: Total marks= $74 \times 7 = 518$ , then average= $(518+79)/8 = 74.625$

Pattern 65:

1) 3 persons a,b,c were there A always says truth,B lies on Monday,tusday,& Wednesday.but C lies on thrusday,Friday & saturday .one day A said"that B & C said to A that" B said "yesterday way one of the days when I lies",C said that"yesterday way one of the days when I lies too".then which day was that?

- a) Sunday b) Thursday c) Saturday d) Tuesday

Pattern 66:

1) Which is the smallest no which divides 2880 and gives a perfect square?

- a) 4 b) 9 c) 3 d) 5

Solution: For answer solve via options

Pattern 67:

1) How many 9 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by 4 if the repetition is allowed?

- a) 57 b) 56 c) 59 d) 58

2) how many 13 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by 4 if repetition of digits is allowed?

3) By using 1,2,3,4,5,how many 5 digit no. can be formed which is divisible by 4,repetation of no. is allowed??

4) Form 8 digit numbers from by using 1, 2,3,4,5 with repetition is allowed and must be divisible by4?

5) How many of 14 digit numbers we can make with 1,2,3,4,5 that are divisible by 4. Repetitions allowed.

Pattern 68:

1) Consider two tumblers, the first containing Water and next contains coffee. Suppose you take one spoon of water out of the first tumbler and pour it into the second tumbler. After moving you take one spoon of the mixture from the second tumbler and pour it back into the first tumbler .

Which one of the following statement holds now?

- a) There is less coffee in the first tumbler than water in the second tumblers
- b) There is more coffee in the first tumbler than water in the second tumbler
- c) There is as much coffee in the first tumbler as there is water in the second tumbler
- d) None of the statements holds true

Solution: Think wisely and answer these are asked in my paper 2 or 3 questions

2) Two bowls are taken, one contains water and another contains tea. One spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl. Which statement will hold good for the above?

Pattern 69:

1) Six friends decide to share a big cake. Since all of them like the cake, they begin quarreling who gets to first cut and have a piece of the cake. One friend suggests that they have a blindfold friend choose from well shuffled set of cards numbered one to six. You check and find that this method works as it should simulating a fair throw of a die. You check by performing multiple simultaneous trials of picking the cards blindfold and throwing a die. You note that the number shown by the method of picking up a card and throwing a real world die, sums to a number between 2 and 12. Which total would be likely to appear more often – 8,9 or 10?

- a) 8 b) All are equally likely c) 9 d) 10

Solution: Calculate how many times 8,9,10 will come when we throw 2 dice, and answer

Pattern 70:

Q1. Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line, i.e. the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The minimum value of  $n_1(P)$  over all configurations P of 5 points in the plane in general position (i.e no three points in P lie on a line) is

- a) 3 b) 5 c) 2 d) 1

Ans: 5

For below questions, answers I am not sure whether they are correct or not you have to solve yourself

Q2. The citizens of planet nigiet are 8 fingered and have thus developed their decimal system in base 8. A certain street in nigiet contains 1000 (in base 8) buildings numbered 1 to 1000. How many 3s are used in numbering these buildings?

- a) 54 b) 64 c) 265 d) 192

Ans: 192

Some times base value is change like: 9finger, 1 to 100(base 9)

Q3. Given 3 lines in the plane such that the points of intersection form a triangle with sides of length 20, 20 and 30, the number of points equidistant from all the 3 lines is

a)1 b)3 c)4 d)0

Q4. Hare in the other. The hare starts after the tortoise has covered 1/5 of its distance and that too leisurely. A hare and a tortoise have a race along a circle of 100 yards diameter. The tortoise goes in one direction and the hare in the other. The hare and tortoise meet when the hare has covered only 1/8 of the distance. By what factor should the hare increase its speed so as to tie the race?

- a) 37.80 b) 8 c) 40 d) 5

Ans: 37.80

Q5. Here 10 programmers, type 10 lines with in 10 minutes then 60 lines can type within 60 minutes. How many programmers are needed?

- a) 16 b) 6 c) 10 d) 60

Solution:  $(\text{men} * \text{time}) / \text{work}$

Ans: 10

This type of Q's repeated 4times for me but values are different.

Q6. Alok and Bhanu play the following min-max game. Given the expression

$$N = 9 + X + Y - Z$$

Where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu

would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be

- a) 0 b) 27 c) 18 d) 20

The Q's concept is same but the equation of N's is changing.

Q7. Alice and Bob play the following coins-on-a-stack game. 20 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack.

Alice starts and the players take turns. A turn consists of moving the coin on the top to a position i below the top coin ( $0 = i = 20$ ). We will call this an i-move (thus a 0-move implies doing nothing). The proviso is that an i-move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coin is the third coin from the top. Then

- a) In order to win, Alice's first move should be a 1-move.  
b) In order to win, Alice's first move should be a 0-move.  
c) In order to win, Alice's first move can be a 0-move or a 1-move.  
d) Alice has no winning strategy.

Ans: d

Q8. For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A's chances of winning. Let's assume such rumors to be true and that in a match between Ghana and Bolivia, Ghana the stronger team has a probability of  $2/3$  of winning

the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?

- a) 1/9 b) 4/9 c) 5/9 d) 2/3

Ans: 5/9

Q9. 36 people {a<sub>1</sub>, a<sub>2</sub>, ..., a<sub>36</sub>} meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs, {a<sub>1</sub>, a<sub>2</sub>}, {a<sub>2</sub>, a<sub>3</sub>}, ..., {a<sub>35</sub>, a<sub>36</sub>}, {a<sub>36</sub>, a<sub>1</sub>}. Then size of the smallest set of people such that the rest have shaken hands with at least one person in the set is

- a) 12 b) 11 c) 13 d) 18

Ans: 18

Q10. After the typist writes 12 letters and addresses 12 envelopes, she inserts the letters randomly into the envelopes (1 letter per envelope). What is the probability that exactly 1 letter is inserted in an improper envelope?

- a) 1/12 b) 0 c) 12/212 d) 11/12

Ans: b

Q11. A sheet of paper has statements numbered from 1 to 40. For each value of n from 1 to 40, statement n says "At least  $n$  of the statements on this sheet are true." Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The first 26 statements are false and the rest are true.
- c) The first 13 statements are true and the rest are false.
- d) The odd numbered statements are true and the even numbered are false.

Ans: c

Q12. There are two boxes, one containing 10 red balls and the other containing 10 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is

- a) 1/2 b) 14/19 c) 37/38 d) 3/4

Ans: 14/19

Q13. A circular dartboard of radius 1 foot is at a distance of 20 feet from you. You throw a dart at it and it

hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

- a) 0.75 b) 1 c) 0.5 d) 0.25

Ans: d

Q14. A and B play a game of dice between them. The dice consist of colors on their faces (instead of numbers). When the dice are thrown, A wins if both show the same color; otherwise B wins. One die has 4 red face and 2 blue faces. How many red and blue faces should the other die have if the both players have the same chances of winning?

- a) 3 red and 3 blue faces
- b) 2 red and remaining blue
- c) 6 red and 0 blue
- d) 4 red and remaining blue

Ans: a

Q15. On planet zorba, a solar blast has melted the ice caps on its equator. 8 years after the ice melts, tiny plantoids called echina start growing on the rocks. echina grows in the form of a circle and the relationship between the diameter of this circle and the age of echina is given by the formula

$$d = 4 * \text{sqrt}(t - 8) \text{ for } t = 8$$

Where the represents the diameter in mm and t the number of years since the solar blast.

Jagan recorded the time of some echina at a particular spot is 24 years then what is diameter?

- a) 8
- b) 16
- c) 25
- d) 21

Ans: 16

Q16. A sheet of paper has statements numbered from 1 to 40. For all values of n from 1 to 40, statement n says: 'Exactly n of the statements on this sheet are false.' Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered statements are false.
- b) The odd numbered statements are true and the even numbered statements are false.
- c) All the statements are false.
- d) The 39th statement is true and the rest are false.

Ans: d

Q17. Alok and Bhanu play the following coins in a circle game. 99 coins are arranged in a circle with each coin touching two other coin. Two of the coins are special and the rest are ordinary. Alok starts and the players take turns removing an ordinary coin of their choice from the circle and bringing the other coins closer until they again form a (smaller) circle. The goal is to bring the special coins adjacent to each other and the first player to do so wins the game. Initially the special coins are separated by two ordinary coins O1 and O2. Which of the following is true?

- a) In order to win, Alok should remove O1 on his first turn.
- b) In order to win, Alok should remove one of the coins different from O1 and O2 on his first turn.
- c) In order to win, Alok should remove O2 on his first turn.
- d) Alok has no winning strategy.

Ans: d

Q18. Two pipes A and B fill at A certain rate B is filled at 10, 20, 40, 80. If 1/4 of B if filled in 21 hours what time it will take to get completely filled

Ans: 23

Q19. Find average speed if a man travels at speed of 24kmph up and 36kmph down at an altitude of 200m.

Formula is  $2xy/(x+y)$ .

Q20. One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children.

What is the age of eldest child?

Ans: 18

Q21. Ferrari is leading car manufacturer.\*Ferrari S.p.A.\* is an Italian sports car. It has enjoyed great success. If Mohan's Ferrari is 3 times faster than his old Mercedes which gave him 35kmph if Mohan travelled 490 km in his ferrari the how much time(hours) he took?

Easy one try it.

Q22. By using 1,2,3,4,5, how many 12 digit no. can be formed which is divisible by 4, repetition of no. is allowed?

Ans:  $(5)^{11}$

Q23. The cost 1 plum is 1 cent, 2 apples is 1 cent, 3 cashew is 1 cent. If father buys same amount of fruits for his 3 sons spending 7 cent then what amount of fruit each child will get?

Ans: 1plum, 2apples, 1cashew

Q24. There are some 2 wheelers and 4 wheelers parked total number of wheels present is 240 then how many 4 wheelers were there

Ans: For this question answer is deduced from the options.

Q25. One day Alice meets pal and byte in fairyland. She knows that pal lies on Mondays, Tuesdays and Wednesdays and tells the truth on the other days of the week byte, on the other hand, lies on Thursdays, Fridays and Saturdays, but tells the truth on the other days of the week. Now they make the following statements to Alice – pal. Yesterday was one of those days when I lie byte. Yesterday was one of those days when I lie too. What day is it?

a) Thursday b) Tuesday c) Monday d) Sunday

Ans: a

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### Latest TCS Fresher Job Interview Paper Pattern 10, January 2011

Company Name : TCS

Type : Fresher, Job Interview.

Hello friends.

TCS came to MCKV Institute of Engineering on 10th January 2011 for campus recruitment.

Here I am sharing my interview experiences with all of you.

#### Aptitude Test

First of all, u need to clear the aptitude test which consists of 35 questions in 80 minutes. For that u need to prepare the questions in freshers world very well.

I sat for the aptitude test around 1.10 pm. The results were declared around 3 pm. and I was selected for interview.

#### Interview:

Now, as far as the interview is concerned. It was a combined TECH+HR interview. There were nearly 10 panels each consisting 1 Sir/madam. They were in different rooms and around 3:55pm the coordinator told me to go to room no. 312.

Here is the questions of interview which was asked to me:

Me : May I come in Sir.

Interviewer : ya sure.

Me : Thank you sir.

Interviewer : (while watching my form) So, Pritam. how's the day going?

Me : It's a fine day sir. But I'm a bit tensed.

Interviewer : why so?

Me : It's my life's first interview sir.

Interviewer : (smiling) Do you need some water? offering me a bottle of water)

Me : Yes sir...Thank you.

Interviewer : Feeling better now.

Me : Yes sir, thanks again.

Interviewer : Fine now Pritam! Tell me something about yourself.

Me : Told. (Please be prepared for this, this is your chance to impress the interviewer at the very beginning of the interview). I gave him my introduction, citing my strong points & I ended my introduction with a question : "Is there anything else you want to know about me sir???"..

Interviewer : No Pritam , That's fine. Do you know binary tree? what is it?

Me : Told.

Interviewer : Good. What is binary search? what is its time complexity?

Me : Told. (I think he liked my answer)

Interviewer : Ok. Do you know about linked lists?

Me : Yes sir.

Interviewer : What are the differences between link list and array?

Me : I told about memory allocations .etc

Interviewer : Write a code for insertion at any position in singly linked list.

Me : Sir, should i write the whole code or just the logic will do?

Interviewer : Ok, explain the logic.

Me : told.

Interviewer : Do you know DBMS? what is the difference between DBMS and RDBMS?

Me : Answered.

Interviewer : What is normalization? Explain the normal forms.

Me : Sir, I can't explain it upto BCNF. I don't know 4th and 5th normal forms very well.

Interviewer : Ok, do it.

Me : I answered with an example. The example i had given was a poor example (i gave a,b,c,d as column names) as I forgot the example i prepared, so be prepared with a real world example.

Interviewer : Fine. Do you know C?

Me : Yes sir.

Interviewer: Write a program to print

\*

\* \*

\* \* \*

height is given by the user.

Me : Quickly did it.

Interviewer: Good. Now can you print

1

2 3

4 5 6

7 8 9 10

like this?

Me : I did.

Interviewer : What's the similarity between structures and union?

Me : Answered.

Interviewer : Do you know java?

Me : Yes sir.

Interviewer : What r the types of polymorphism in java?

Me : I told with examples i prepared from Herbert Schildt.

Interviewer : Ok. Why do you want to join TCS?

Me : I told about the stature of the company, how i can make myself & the company grow in a mutual environment...also told about various awards TCS got, great feedback from my senior who r TCS employee. also told about N Chandrashekharan, who joined TCS as trainee like us & now is the CEO.

Interviewer : (Impressed) Ok Pritam, that's all i need to know. (Smiling) Do you have any question?

Me : Yes Sir. I was going through the TCS website yesterday and the first thing that I saw was Global Network Delivery Model. I am very eager to know what is it?

Interviewer : It's a vast topic Pritam. But to be precise. (then he explained the basic idea of GNDM)

Me : Thank you sir. It's a pleasure to talk with you sir.

Interviewer : Same here Pritam. (Than he willingly brought his hand forward to shake my hand)

Me : Shook his hand with a smile in face. Then again saying thank you, i came out of the room.

My interview went for about 35 minutes. I came out around 4.30 pm. The results were declared at 8 pm...and I was selected. I was like on cloud nine. More so because almost all of my friends were selected. But, some did not get through, I was feeling bad for them. But you never know. a much bigger opportunity may be waiting for them.

So, all aspirants, prepare well, be confidant & never lose hope.

just remember one thing : You need not prepare all subjects at once. Prepare those which you are comfortable...

& then keep in mind that : "You don't have to remember everything...because no interviewer is smart enough to ask you everything".

Finally, thank I thank fresher world for helping me a lot during preparation & giving me the chance to share my experience.

solving the aptitude questions.

All The Best.

Exam/Interview Date : 10th, January 2011.

No of Rounds : Aptitude Test, Interview

Contributor Name : PRITAM KUMAR PAUL

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Latest TCS Fresher Job Interview Paper, 13 January 2011

Company Name: TCS  
Type: Fresher, Job Interview  
Venue: JIS Group, Kolkata  
Placement Date: 13, January 2011.

Selection process:

1. Aptitude Test
2. Personal Interview

Written Test:

1) For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A's chances of winning.

Let's assume such rumors to be true and that in a match between X and Y, X the stronger team has a probability of  $4/5$  of winning the game. What is the probability that Paul will correctly pick the winner of the X-Y game?

Ans:  $((4/5)^2 + (1-4/5)^2)$

2) A circular dart board of radius 1 foot is at a distance of 20 feet from you. You throw a dart at it and it hits the dartboard at some point X in the circle. What is the probability that X is closer to the center of the circle than the periphery?

Ans:  $\pi(1/2)^2 / \pi(1)^2 = .25$

3) Given 3 lines in the plane such that the points of intersection form a triangle with sides of length 20, 20 and 30, What is the number of points equidistant from all the 3 lines?

Ans: here ans will be 4 because in question it is given as 3 line.  
but in case of 3line segment ans will b 1.

4) 36 people  $\{a_1, a_2, \dots, a_{36}\}$  meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs,  $\{a_1, a_2\}, \{a_2, a_3\}, \dots, \{a_{35}, a_{36}\}, \{a_{36}, a_1\}$ . Find the size of the smallest set of people such that the rest have shaken hands with at least one person in the set.

Ans:  $(2, 5, 8, 11, 14, 17, 20, 23, 26, 29, 32, 35)$  so there are 12 handshake possible or simply  $N/3=36/3=12$ .

5) After the typist writes 12 letters and addresses 12 envelopes, he inserts 1 letter per envelope randomly into the envelopes. What is the probability that exactly 1 letter is inserted in an improper envelope?

Ans: 0.

6) A sheet of paper has statements numbered from 1 to 35. For all values of n from 1 to 35, statement n says "At most n of the statements on this sheet are false". Which statements are true and which are false

Ans: this type f question very important in my set it come 4 times. The simple solution is that for-Exactly -the  $(n-1)$  statement s true and left r false

At least-the first half statements r true & rest r false

Almost-all the statements r true.

7) Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line; i.e. the point lies on one side of the line while the others lie on the other side.

The number of 1-sets of P is denoted by  $n_1(P)$ . Find the maximum value of  $n_1(P)$  over all configurations P of 10 points in the plane.

Ans:10

8) A and B play the following min-max game. Given the expression

$$N = 12 + X*(Y - Z)$$

where X, Y and Z are variables representing single digits (0 to 9), "A" would like to maximize N while "B" would like to minimize it. Towards this end, "A" chooses a single digit number and "B" substitutes this for a variable of her choice (X, Y or Z). "A" then chooses the next value and "B", the variable to substitute the value. Finally "A" proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be

Ans: here also a rule s there.

For  $X-Y-Z=2$ ,

$X+Y-Z=11$ ,

$X*(Y-Z)=18$

$X*(Y+Z)=18$ ,

in my set these type f question repeat 2times.

9) 1/3 of a number is 6 more than 1/6 of the same number. What is the number?

Ans:36

10) Two pipes A and B fill at A certain rate B is filled at 10,20,40,80,. If 1/16 of B if filled in 17 hours what time it will take to get completely filled.

Ans: For data structure type f question simply find 16 prime factor how many 2s r coming count dn add it wth givn 17 hr.so here ans s 21.

11) On planet Corba, a solar blast has melted the ice caps on its equator. 8 years after the ice melts, tiny plantoids called echina start growing on the rocks. echina grows in the form of a circle and the relationship between the diameter of this circle and the age of echini is given by the formula

$$d = 4 * (t - 8) \text{ for } t \geq 8$$

where d represents the diameter in mm and t the number of years since the solar blast.

If you record the radius of some echina at a particular spot as 8mm. How many years back did the solar blast occur?

Ans: Put the value f  $d=2*8=16$ .

12) Alice and Bob play the following coins-on-a-stack game. 20 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack. Alice starts and the players take turns. A turn consists of moving the coin on the top to a position i below the top coin ( $0 = i = 20$ ). We will call this an i-move (thus a 0-move implies doing nothing). The proviso is that an i-move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coinis the third coin from the top

Ans: for winning player should move 1 at first.

13) There are certain number of hats and gloves in a box. They are of 41 red, 23 green, 11 orange. Power gone. But a woman can differentiate between hats and gloves. How many draws are required to obtain a pair of each color.

Ans: For data structure question simply add larger one+middle1+2

14) 20 people meet and shake hands. The maximum number of hand shakes possible if there is to be no 'cycle' of handshakes is( a cycle of handshake is a sequence of people a1,a2, ....ak) such that people(a1,a2),(a2,a3).....(a(k- 1),ak),(a2,a1) shake hand is

Ans: for cyclic d formula  $s(n)$  for non-cyclic d formula  $s(n)c_2$ . here it's cyclic.

16) The IT giant TIRNOP has recently crossed a head count of 150000 and earnings of \$7 billion. As one of the forerunners in the technology front, TIRNOP continues to lead the way in products and services in India. At TIRNOP, all programmers are equal in every respect. They receive identical salaries and also write code at the same rate. Suppose 12 such programmers take 12 minutes to write 12 lines of code in total. How many lines of code can be written by 72 programmers in 72 minutes?

Ans: Here also has simple solution if question ask to find no. of mint & no. of programmer ans will be first 1 i.e here it will be 12. and if question asked to find no. of line formula will be  $12 \times 72 \times 72 / (12 \times 12)$

I get data Structure type of question 3 times.

At last I want to suggest please visit all the TCS aptitude question website and also placement puzzle, math's.

In our college cut off was 33 and I attempted 34 and all was right.

## 2) Personal Interview Round

1) Tell me about yourself

2) As I was electrical engineering student so HR asked some basic thing from core subject like. In tower how the light is controlled and earthing.

3) From data structure he asked bubble sorting, Fibonacci program to write, what is HTTP, how many protocols are there.

4) Now he asked some HR type question like as you are coming from where, why do you want to shift your career from core to software.

5) Asked me about my project.

6) Weakest and strength point

7) Asked if in an office if you are appointed where everyone knows Hindi but you don't know Hindi how will you communicate with them

8) And so more I forgot some of them. My interview was for 1/2 hr.

Exam/Interview Date: 13, January 2011.

No of Rounds: Aptitude Test, Technical Round-1, Personal Interview

Location: Kolkata

Contributor Name: JR

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## Latest TCS Fresher Job Interview Paper Pattern 12, January 2011

Company Name : TCS

Type : Fresher, Job Aptitude Test Paper

Hi Friends!

I have appeared for TCS on campus on 12th January at GNIT along with other 1300 students (JIS + Narula+ GNIT) .TCS had previously (in the month of December) given away their Demo paper to many colleges and we were no exception. We practiced them repeatedly. On the day of the aptitude test we found that each & every question in the aptitude was from those papers given previously by TCS. We were very happy, we answered around 28(correct) on an avg. I personally answered 30(correct), could have answered >32 but didn't due to the fear of uppercut off. In general cases it remains (lower cutoff 18 & upper cutoff >32).  
But Eventually when results were out-BELIEVE IT OR NOT, THE LOWER CUTOFF WAS 33 OUT OF 35.THOSE WHO HAVE ANY DOUBT CAN ASK THIS TO ANY STUDENT OF JIS/GNIT/NARULA OF BATCH 2011 PASSOUT.

Aptitude Test:

Questions are:

You will get question in TCS out of these questions.

#### SET : 1

1. There is a toy train that can make 10 musical sounds. It makes 2 musical sounds after being defective. What is the probability that me musical sound would be produced 5 times consecutively? (1 of \_\_\_\_\_)?
2. Peter and Paul ate two friends. The sum of their ages is 35 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the preset age of Peter?
3. The ages of two friends is in the ratio 6:5. The sum of their ages is 66. After how many years will the ages be in the ratio 8:7?Ans-12
4. There are 5 materials to make a perfume: Lilac, Balsamic, Lemon, Woody and Mimosaic. To make a perfume that is in demand the following conditions are to be followed: Lilac and Balsalmic go together. Woody and Minosaic go together, Woody and balsalmic never go together. Lemon can be added with any material. All of the following combinations are possible to make a perfume EXCEPT:
  - (a) Balsalmic and Lilac
  - (b) Woody and Lemon
  - (c) Mimosaic and Woody
  - (d) Minosaic and LilacAns-4
5. A girl has a make pizza with different toppings. There are 8 different toppings. In how many ways can she make pizzas with 2 different toppings?Ans-nC2 \* 2
6. A triangle is made from a rope. The sides of the triangle are 25 cm, 11 cm and 31 cm. what will be the area of the square made from the same rope?Ans-16.752 cm<sup>2</sup>
7. what is the distance between the z-intercept from the x0intercept in the equation  $ax+by+cz+d=0$ . Ans (- d/a)
8. An athlete decides to run the same distance in 1/4th less time that she usually took. By how percent will she have to increase her average speed?  
Ans-300%
9. A horse chases a pony 3 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 35 kmph, what is the average speed of the pony? Ans-20kmph
10. There is 7 friends (A1,A2,..A7). If A1 have to have shake with all without repeat. How many hand shakes possible?Ans-6
11. There are two pipes A and B. If A filled 10 liters in an hour B can fills 20 liters in same time.

Likewise B can fill 10, 20, 40, 80, 160, .if B filled in (1/6) the of the tank in 3 hours, how much time will it take to fill completely?

12. 10 tables, 4chairs per table, each table has different number of people then how many tables will left without at least one person.

13. The age of two friends is in the ratio 5:6, after how many years will the ages be in the ratio 7:8?

14. A men whose age is 45 yrs has 3 sons named Johan, Jill and Jack. He went to a park weekly twice. He loves his sons very much. On a certain day he finds shopkeepers selling different things. An apple cost 1penny, 2chocalate costs 1penny, & 3 bananas cost 1penny. He has bought equal no. of apple, chocolate and banana for each son. If the total amount he invest is 7 penny then how many he has bought from each piece for his son?

a) 1app, 1 chow, q banana

b) 1app, 2cho, 3banana

c) 1app, 2cho, 1banana Ans-c

15. A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he traveled 1mile in north direction and reached at North Pole. There he saw a bear he then followed the bear around 1hr with a speed of 2km/hr in east direction. After that he traveled in south direction and reached at his lab in 2 hrs. Then what is the colour of the bear?

a) white, b) black, c)grey, d) brown

16. In a particular city there are 100 homes numbered from 1,2,3.....100. The city was build by a builder from Chennai. There were 4 to 5 shops in the town which was build by a builder from Mumbai. THE 2nd builder can build in  $\frac{1}{2}$  time as compared to 1st builder. If the 2nd builder builds in 15 days, then how many 2's are used by the builder from Chennai in numbering the 100 homes?

a) 17, b) 18, c) 19 d) 20

17. Mr. Das has 3 sons whose ages are respectively a, b, c. The grandfather has bought a cycle for the eldest son, mother has bought a bag for the youngest one which cost Rs. 150/. The sum of two age of the elder son and one son is 15. The difference of the age of sons is 3 & 2. Then what of the age of the elder son?

a) 10, b) 11, c) 12, d) 13 Ans-10

18. We all know that Aryabhatta is the greatest mathematician who belong to India. When his daughter Mayabati was in her teen age he discovered a problem. At that the time the age of Mayabati is a prime number, let that age is A . After some years her age becomes B. then Aryabhatta was able to solve that problem with the help of his daughter Mayabati. If  $a-b=5$  & product of a & b is 26 then what is the sum of two squares? Ans-77

19. How many 13 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by 4 if repetition of digits is allowed?

20.  $(40*40*40-31)/(40*40*40+31+31*31)=?$

21.  $x/2y=2a$ , then  $2x/x-2ay=?$ Ans-(4-x)/2

22. Mr. Behera wants to build a house for his wife. In this there are 5 rooms each having equal area. The length of each room is 4m, breadth is 5m. The height of the rooms is 2m. If to make a sq meter we need 17 bricks, then how many bricks are needed to make the floor of a particular room?Ans-140

23. On Tuesday College parking palace have only 4wheelers and bicycles, total no of wheels was 182, then what is the possible no of bicycles?

- a) 20, b)19, c) 18, d)17
24. On average age something like a, b, c weighted separately 1st a, b, c, then a & b, then b &c , then c 7 a at last abc, then last weight was 167, then what will be the avg. weight of the 7 weight?
25. Arrange the jumbled letters to make a perfect word RGTEI. Find to which category it belong?
- a) Town, b) vegetable, c) animal, d) bird
26. 3 persons a, b, c were there A always says truth, B lies on Monday, Tuesday and Wednesday. But C lies on Thursday , Friday and Saturday. One day A said “ that B and C said to A that” B said” yesterday way one of the days when I lies”, C said that” yesterday way one of the days when I lies too”. Then which day was that?
- a) Sunday, b) Thursday, c) Saturday d) Tuesday
27. A mathematical series present like: 8 6 17 35 30 71 \_ 143.
28. One man want to build a wall the length and breadth of the wall are 20, 30 respectively, he need 35 bricks for one square centimeter then how many bricks he need?
29. One person had three children. He has 7 pennies. Then how he can distribute the fruits among his child by following conditions.
- (a) He can get one water millon for 1 penny.  
 (b) He can get 2 oranges for 1 penny.  
 (c) He can get 3 grapes for 1 penny.
30. 1/3rd of a number are more 3 than the 1/6th of a number then find the number?
31. In T nagar many buildings were under residential category for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. How many time 6 will appear in building numbering?Ans-26
32. One grand father has 3 grand child. Eldest one are is 3 times of the youngest child age. Sum of two youngest child age is more than two of eldest one age. Find the eldest one age?
33. The difference b/w two numbers is 4. And their product is 17. Then find the sum of their squares?
34. Find category from following Jumbles=d letters, PARAKEET
35. Which is the smallest digit when divides the 2880 gives perfect square.?Ans-5
36. I don't have any brothers and sisters. By pointing a picture that man said that his father is my fathers Son then who is he?
- Ans- is the man
37. 6 persons standing in queue with different age group, After two years their average are will be 43 and seventh person joined with them. Hence the current average age has become 45. Find the age of seventh parson?
38. The ratio b/w the ages of two persons is 6:5 and sum of there ages is 77 then how many years later there ratio becomes 8:7?
39. Horse started to chase a dog as it relieved stable two hrs ago. And horse started to ran with average speed 22km/hr, horse crossed 10 mts road and two small pounds with depth 3m, and it crossed two small streets with 200 mts length. After traveling 6hrs, 2hrs after sunset it got dog. Compute the speed of dog?
40. If six friend go to pizza corner there r 2 type s of pizzas. And six different flavors are there, they have to select 2 flavors from 6 flavors what's chances to select?
41. 3, 22, 7, 45, 15, ?, 31 Complete the series. Ans 76
42. A & B takes are there 1/8th of the tank B filled in 22 Hrs. what is time to fill the tank full?

43. 5 friends went for week end party to Mc Donald's restaurant and there they measure there weights final measure is 155 kg then find the average w=weight of 5 people?Ans-31

44. 2 post are there. 1st pot is filled with ink and 2nd pot is filled with water take 1 spoon of ink from 1st pot and pore it in 2nd pot. And take 1 spoon pf mixture from 2 and pot ad pore it in 2nd pot then which one of following is true?

Lion said that today is one of those days when I lie.

Tiger said that today is one of those days when I lie too. Then find the day when both lie together?

45. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. Hence the current average age has become 45. Find the age of seventh person?

46.  $((4x+3y)+5x+9y)/(5x+5y)=?$  As  $(x/2y)=2$

47. If we subtract a number with y, we get 4 increase of number, once it got divided by y itself....Find the number??

48. I'm only son for my parents. The man in picture is my father's son. Who is he?Ans-the man

49. A toy train can make 10 sounds sound changes after every 4 min now train is defective and can make only 2 sounds, find probability that same sound is repeated 3 times consecutively?

(a) 16 (b) 8 (c) 12 (d) 4

50. I have 3 grandsons. The age diff btw 2 of grandsons is X yrs. 1st grandson is twice elder than younger one addition off ages of all the three is y then what is age of eldest grandson?

Ans= $2(x+y)/5$

51. Ferrari is leading car manufacturer car . It has enjoyed great success. If Mohan's Ferrari is 3 times faster than his old MERCEDES which gave him 35 kmph if Mohan traveled 490 km in his Ferrari, then how much time (hours) he took?

(a).8 (b). 4 (c) 7 (d) 7 Ans-d (approx.)

52. Lion and rat stay in jungle happily. Lion lies on : MON TUE WED, RAT lies on : WED THURS SAT, if lion says : I didn't lie yesterday, RAT says : e1 didn't lie yesterday, so what day is today? Ans-sunday

53. The ratio of current age of x and y is 5:7, after how many years their age ratio will b 7:9?

54. Inspired by Fibonacci series sanket decided to create is own series which is 1, 2, 3, 7, 7, 22, 15, 67,.....what number come immediately before 67?

55. By using 1,2,3,4,5 how many 5 digit no. cam be formed which is divisible by 4, repetition of no. is allowed?

Ans-30 explain- $(5!/1!)/4=30$

56. The cost 1 plum is 1 cent, 2 apples is 1 cent, 3 bananas is 1% if Rahul buys same amount of fruits for his 3 sans appending 7 cent den what amount of fruit each child will get?

57. 2880 is divided by which smallest no. so we get no. 1 which is perfect square? Ans=5

58. There are two prime numbers, the addition of two prime no is 13, and multiplication is 21, den what is the some of there squares? Ans=107

59. Smita was making 1 design, size of larger cube to be made is 5\*5\*5using smaller cubes of 1\*1\*1. She created solid larger cube.. Then she decided to make hollow cube. Then how many 1\*1\*1 cubes required to make hollow larger cube.

Ans-6L2 -8=150-8=142

60.  $2x/5y=5x/3y$ ...den what is x/y

61. A pizza parlor provides pizzas. There were 2 topping available initially pepperoni and salami.

but not they ,have introduces 8 new toppings to select from. A person whishes to buy two DIFFERENT pizzas of NEW topping in how many ways he can do that??

62. Person travels to a place. If he goes from A to B with speed of 4kmph and return back to B with speed of 5 kmph. What is his avg. speed of journey? Ans-(20/9)=2.22kmph

63. There is a dice having value from 1 to 6 on each face and a pack of cards having face card aces. When 2 dices are thrown and their scores are added then which sum will come max number of times?

(a) \* (b) 9 (c) 10 (d) 11

64. "Susha brought terilon cloth and rope to make a thing. If rope is 153 m long and it is to be cut into pieces of 1 m long then how many times will she have to cut it??

Ans-151 stimes

65. There are some 2 wheelers and 4 wheelers parked total number of wheels present is 240. Then how many 4 wheelers were there?Ans-max(15)

66. 1/3 of a number is 6 more than 1/6 of that number then what is the number?Ans-36

67. The cost of making a robot consists of material cost, repairing cost, coloring cost and is in the ratio 3:4:5, if the material cost is 1200 then find out the cost of the robot.

68. There are pepsi 1 liter and oil 1 liter. It is given is 1 spoon of Pepsi is taken and is mixed with Oil. Then 1 spoon oil and Pepsi is taken and is mixed with Pepsi then which of the condition holds true.

69. A tank is filled with water in first hour 10 lit, Second hour 20 lit and in 3 rd hour time 40 lit. If time taken fill  $\frac{1}{4}$  of the tank is 5 hr. what is the time required to fill up the tank.

Ans-10.45hr

70. Which is the smallest no divides 2880 and gives a perfect square?

Ans-5.

71. Two bowls are taken, one contains water and another contains tea. One spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl. Which statement will hold good for the above?

72. From 8 digit numbers from by using 1,2,3,4,5 with repetition is allowed and must be divisible by 4?

(a) 31250 (b) 97656 (c) 78125 (d) 97657

73. Rearrange and categorize the word 'RAPETEKA'? Ans-katerpeta

74. In school there are some bicycles and 4 wheeler wagons. One Tuesday there are 190 wheels in the campus. How many bicycles are there?Ans-95

75. A lies on mon, tues, wed and speak truth on other days, B lies on thur, fri, sat and speaks truths on other days ....one day a said I lied today and B said I too lied today. What is the day? Ans-sunday

76. A father has 7 penny's with him and 1 water melon is for 1 p, 2 chickoos for 1 p, 3 grapes for 1p, he has three sons. How can he share the fruits equally?

77.  $(\frac{1}{2})$  of a number is 3 times more than the  $(\frac{1}{6})$  of the same number?

78. A man is standing before a painting a man and he says I have no brother and sister and his father is my father's son?

79. One question has last part like difference between two terms is 9 and product of two numbers is 14, what is the squares of sum of numbers?Ans-119

80. What is the value of  $[(3x+8y)/(x-2y)]$ ; if  $x/2y=2$ ?Ans-10

81. A pizza shop made pizzas with 10 flavors in home. there are 'N' different flavors, in that 'M' flavors are taken to made pizza. In how many ways they can arrange? Ans-nCm

82. One grandfather had three grandchildren, two fathers their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

83. In one organization material, labor and maintenance are in the ratio of 4:6:7, the material cost is 100, what is the total cost? Ans-525

84. In a market 4 men are standing the average age of the four before 4 years is 45, after some days one man is added and his age is 49, what is the average weight of all?

85. In school for a student out of 100 got 74 of average for 7 subjects and he got 79 marks in 8th subjects. What is the average of all the subjects?

86. In a question, last part has the age of two people has the ratio of 6:6 and by adding the numbers we get 44, after how many years the ratio would be 8:7?

87. One train travels 200m from A to B with 70 km/ph and returns to A with 80kmph, what is the average of their speed?

Ans-75 km/hr

88. Two years before Paul's age is 2 times the Alice age and the present age of Paul is 6times the Alice. What is the present Paul's age? Ans-(-3)

89. There is Ferrari and Benz car, Benz speed is say 10kmph and it covers 10 km. and if Ferrari goes with 3 times faster than Benz. So in how much time Ferrari could take to cover same distance. Ans-1/3

90. If one land has 3 daughters and any out of 3 have difference of ages is 3 and oldest is 3 times of more than 2 then youngest ate 2 then tell the age of oldest daughter.

91. If a person moves 15km straight and turns 45km right and moves 15km straight then how much distance he needs to walk to reach starting point? Ans-45km

92. If there are 30 cans out of them one is poisoned if a person tastes very little he will die within 14 hours so if there are mice to test and 24 hours how many mice are required to find the poisoned can?

93. If A and B mixed in 3:5 ration and B, C are mixed in 8:5 ration if the final mixture is 35 liters, find the amount of b in the final mixture. Ans-(40/99)\*35=14.14

94.  $1!+2!+\dots+50!=3*10^{64}$ ?

95. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. Hence in the current average age has become 45. Find the age of seventh person? Ans-59

96. If we subtract a number with y, we get 4 increase of number, once it got divided by y itself....find that number? Ans-3

97. It is the class with the seating arrangement in 4 rows and 8 columns. When the teacher says 'start the girl who is sitting in first row and first column will say 1, then the next girl sitting behind her will say 4, the next girl sitting behind that girl will say 7, in a particular order each girl is telling a number, the following girls told 10, 13 next turn is yours what you will say?

98. It is drunk in my bedroom and I want to get two socks of the same color from my drawer, which contains 24 red and 24 blue socks. How many socks do I have to take from the drawer to get at least two socks of the same color?

(a) 2 (b) 3 (c) 48 (d) 25

99. 100 the cost 1 plum is 1 cent, 2 apples is 1 cent, 3 bananas is 1 cent, if Rahul buys same amount of fruits for his 3 sons spending 7 cent then what amount of fruit each child will get?

Ans-1plum, 2apples, 1bananas

## SET : 2

1. Here are 2 cans A and B one of MILK and other of Water resp., both of same quantity first one teaspoon of milk from a can was added to a can then which of the following is true.  
(a) Can A contain more milk than water in can B  
(b) Can A contain less milk than water in can B  
(c) Both contain same quantity of milk and water
2. If a pipe can fill the tank within 6 hours but due to leak it took 30 minutes more now if the tank was full how much time will it take to get emptied through the leak? Ans-78hr
3. The average weight of class is X kg (some number) after adding wt of the teacher avg. wt. of class becomes Y kg then what is the weight of the teacher?
4. 20 men shake hand with each other. What is the maximum no of handshakes without cyclic handshakes? Ans=20C2=190
5. 100 men & women dance with each other. What is the probability that a man cannot dance with more than two women?
6. A man goes North 37 km turns left goes 2 km turns right goes 17 km turns right goes 2 km, find the distance between starting & ending point .Ans=54
7. Lady has 2 select gloves & hat from a basket is in the dark. She can distinguish hat 7 gloves, 14 red, 20 blue, 18 green are there. Find the probability that any selected glove pair has same color.
8. Peter is 2 times Paul's age was when Peter's age is same as Paul's present age. Find the Paul's age.
9. From a rope a triangle is made of sides 21cm, 24cm, 28cm from this a square is made. Find the area of square.Ans =330 cm<sup>2</sup>
10. In a supermarket average of 4 peoples standing in queue taken 2 yrs before is 55 yrs .Now a person of 45 yrs is added. Find the current age. Ans=68.25 year
11. A toy can produce 10 different sounds. Now toy is defective to produce 2 sounds in 3 minutes, find the probability that it produces 6 consecutive in 1 second?
12. 1/6th of a number is 4 times more than 2/3 of a number. Find number.
13. A jogger jogs@1/6th of his usual speed. How much % she has to increase to reach normal pace of walking. Ans = 500%
14. X is 3 years younger to Y, X's father is a businessman who invested 10000/- at 8% rate of interest and obtained his amount after 10 years .Y's father is a job holder who invested around 20000 at 2% rate and obtained his amount after 20 years . Now compounded both of them get around ABC rs/- . After 5 years the ratio of ages of X & Y is 1:2. Now X's father is 20 years older to Y and Y's father is 30 years more than X. After 20 years again X's mother asks X's father to purchase a LCD TV which costs around 45000/-. What is the age of X and Y together?
15. The bacteria had a probability of splitting into three and a probability to die is one third of total bacteria. Let the probability be P. Some of them survived with probability 1/5 than which among the following relation is true?  
(a)  $P=1/3+1/5*3$   
(b)  $P=1/5*(1/8-3)$
16. If a tank A can be filled within 10 hrs and tank B is 1/4th filled in 19 hrs, then what is the duration of the tank to fill completely?
17. A lady had fine gloves and hats, 25 blue, 7 red and 9 grey .She had to select a pair among them. But there was no light so she had to select in darkness the correct pair with glove and a hat.

Therefore how many combinations of same color she can select?

18. A man looks at a painting and tells "Neither I have brothers nor sisters, but the person in the painting is my father's son". Then who is in the painting? Ans=man

19. An old toy had three grandchildren, the difference between two children was 3 years. Her eldest grandchild was 3 times elder than the youngest one and the elder one 2 years more than the sum of the other two. Then what is the age of the eldest child?

20. There was a grandmother in a village that had a grandchild. Upon asking her grandchild's age she told that she is older as many days old as her daughter's age in weeks and as many days as her own age in years. The sum of the three is 130, then how old is the child?

21.  $(98*98*98-73*73*73)/ (98*98*98+73*73*73) = ?$  Ans=(1003 - 703)/(1003+ 703) =nearly 5

22. Which is the smallest number which on dividing 2880 to make it a perfect square?

(a) 6 (b) 5 (c) 4 (d)3 Ans=2880

23. Leena cut small cubes of 10 cubic cms each, which she joined to form a cube with 10 cm length, 5 cm in depth and 5 cm wide. How many more small cubes does she require to form a perfect cube? Ans= (100 – 25) = 75

24. The age of two people is in the ratio 6:8, the sum of their ages is 77 after 2 years the ratio of their ages becomes 5:7, what is their present age? Ans=33&44

25. If a and b are mixed in 3:5 ratio and b,c are mixed in 8:5 ratio if the final mixture is 35 liters, find the amount of b in the final mixture.? Ans =40/89 \*35

26. A vendor sells 1 apple for 1 penny, 2 grapes for 1 penny, 3 bananas for 1 penny. A man spends 7 penny and gives equal amount of fruits to each of his three daughters. What is the possible number of fruits each daughter gets?Ans=1:2:1

27. 5 persons standing in queue with different age group two years ago their average age will be X and 6th person joined with them; hence the current average age has become Y. Find the age of seventh person?

28. 5,9,12,18,26,36,47,72,.....? .Here odd terms have difference as multiples of 7 and even terms adds with themselves to form the next number. Ans=47+28=75

29. Lion tells lies on Mondays, Tuesday and Wednesday, Rat tells lie on Thursday, Friday and Saturday, Both of them speak truth on other days. Lion tells, "Yesterday was one of the days which, I tell lying", Rat also tells "Yesterday was one of the days which I tell lying:. What day was yesterday? Ans=thursday

30. There were three different gloves 13 red, 27 black and 40 green. How many gloves one has to take so as to ensure that there is at least one pair in each color?

31. One person has no siblings and says." The guy in the photo is the only son of my father's son", what is the relation of the guy to the person? Ans = man

32. Difference of two numbers is 6. Product of them is 13.what is the sum of their squares?  
Ans=62

33. Speed and distance were given and time taken was asked. T=D/S.

34. A lady builds 9cm length, 10 cm width,3 cm height box using 3 cubic cm cubes. What is the minimum number of cubes required to build the box? Ans = 90

35. When a pair of dice is thrown, what number has the higher probability to occur the sum of 8 or 9 or 10?

36. A person has to make 146 pieces of a long bar. He takes 4 seconds to cut a piece . What is the total time taken by him in seconds to make 146 pieces? Ans=480 sec

37. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them, hence the current average age has become 45, find

the age of seventh person? Ans=71 year

38. Horse started to chase dog as it relieved stable two hrs ago. And horse started to ran with average speed 22km/hr, horse crossed 10m road and two small pounds with depth 3m, and it crossed two small streets with 200m length .

After traveling 6 hrs ,2hrs after sunset it got dog. Compute the speed of the dog?

39. 3,22,7,45,15,?,31 Ans=91

40.  $((4x+3y)+5x+9y)/(5x+5y)=?$  as  $(x/2y)=2$

41. If we subtract a number with y, we get 4 increase of number. Once it got divided by y itself .Find that number?

Ans-  $x-y=4+x$   $x/y=x$

42.  $(209*144)^2 +(209*209) + (209*144)+(144*144)=?$

43. By which number should we divide the number 2880 to make it perfect square?

44. 1/3 of some number is 5 more than 1/6th of that number . Find the number? Ans=30

45. Difference of two numbers is 4 and their product is 13. Find the sum of squares of that number?

46. How many of 14 digit numbers we can make with 1,2,3,4,5 that are divisible by 4 .

Repetitions allowed.

47. Rearrange the alphabets REGHFTYD, find the type of rearranged word belongs to:

(a) Animal (b) Tree (c) Bird (d) Thing

48. There is a factory which is producing the bicycles and four wheelers . One day the total production of wheels is 158. Find out the possible no. of bicycles produced

(a) 6 (b) 7 (c) 8 (d) 9

49. Four years hence the average of 6 members is 45 . Now a person is added and the average becomes 48. What is the age of added person?

50. A dog started two hours early before the horse started. The horse reached the dog after 6 hours with the speed of 16 km/hr, find the speed of the dog?

51. There are bacteria which have the probability of die 1/3 of its total number or it may triple . Found out the probability?

(a)  $P=1/3+ (2/3*p^3)$

(b)  $P=2/3+(2/3* p^3)$

(c)  $P=2/3+(1/3* p^3)$

(d)  $P=2/3+ (2/3* p^3)$

52. There are two tanks A, B.A will fill up 1ltr in one hour. B tank will fill up double in every hour (like10, 20, 40, 80,160.....) if the tank B is filled  $1/16$  in 13 hours how much time it will take to fill up totally.

53. In a hotel we can order two types of varieties, but we can make 6 more varieties in home. One can want the four varieties with two from hotel must. Find how many ways one can order.

54. There is a series 13,14,27,30,55,62 ?, 126. Find the missing.

55. There are three friends x,y,z . They go to excursion with their girl friends. There they wanted to find weights but their GF's are not accept to check their weight. Then they check weights as x,y,z individually and then x and y, y and z,x and z , then all(x,y,z) , the last measure is 171. Then find the average of all these seven measures.

56. Two tanks A and B ,A fills 1 ltr/1 hr....B fill 10,20,30,..... Per hour . If 1/4th tank of B takes 15 hrs to fill how much it time will t take to fill complete tank.?

57. Out of 7 children the youngest is boy than find the probability that all the remaining children are boys?

58. The three sides of a triangle are given 16, 14, 21 cm and this triangle is converted into square. So what will be the area of the square generated?
59. An equation of the form  $4x+6y-2z=32$ . Find the difference between x intercept and z intercept.?
60. 20 men and 20 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa.
61. 10 people are there, they are shaking hands together, how many hand shakes possible, if they are in no pair of cyclic sequence.
62. In a school there are some bicycles and 4 wheeler wagons. One Tuesday there are 234 wheels in the campus. How many bicycles are there.?
63. A father has 7 penny's with him and 1 water melon is for 1p, 2 chickkos for 1p, 3 grapes for 1p has three sons. How can he share the fruits equally.?
64. In one organization , materials , labor and maintenance are in the ratio of 4:6:7, if the material cost is 272, what is the total cost?
65. 4 years before Paul's age is 3 times the Alice age and the present age of Paul's is 6 times the Alice , what is the present age of Paul?
66. The ages of two people has the ratio of 6:5 and by adding the numbers we get 55 , after how many years the ratio would be 8:7?
67. A volume of X are having in a container of sphere , how many semi hemispheres of volume each will be required to transfer all the A into semi hemispheres?
68. Peter and Paul are two friends. The sum of their ages is 42 years. Peter is twice as old as paul was when Peter was as old as paul is now. What is the present age of peter?
69. A horse chases a pony 2 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 81 kmph, what is the average speed of the pony?
70. A,B,C,D,E are there among A,B,C are boys and D, E are girls>>>>> D is to the left of A and no girl sits at the middle and at the extremes . Then what is the order of their sittings.
71. A man goes 50km NORTH , then turned left walked 40 km , then turned RIGHT? .In which direction is he in?
72. Out of 6 children the youngest is boy then find the probability that all the remaining children are boys.
73. A man went 1 mile to east then 1 mile to north and killed a bear what is the color of the bear?
74. In a market 4 man are standing , the average age of the four before n4 years is 45, after some days one man is added and his age is 49, what is the average weight of all?
75. One train travels 200m from A to B with 70 km/hr and returns to A with 80 kmph, what is the average of their speed?
76. The three sides of a triangle are given 18, 18, 28 cms and this triangle is converted into a square. So what will be the area of the square generated?
77. An equation of the form  $7x+17y+3z=54$ . Find the difference between x intercept and z intercept?
78. There are 1000 pillars for a temple 3 friends Linda, Chelsey, Juli visited that temple, Linda is taller than Chelsey and taller than 2 of 1000 pillars Juli is shorter than Linda. Find the correct sentence?
- (a) Linda is shorter among them
  - (b) Chelsey is taller than Juli
  - (c) Chelsey is shorter than Juli
  - (d) Cannot determine who is taller among Chelsey and Juli.

79. Entry ticket to an exhibition ranges from 1p to 7p. You need to provide exact change at the counter . You have 7p coin . In how many parts will you divide 7p so that you will provide the exact change required and carry as less coins as possible?

(a) 8 (b) 7 (c) 5 (d) 3

80. Dhoni and Pointing are waiting for the toss to happen, Umpire found that the coin to be tossed is missing .pointing then takes a dice 91-6) from his pocket and asks the umpire to toss with it. Umpire feels both the captains may not get which then would give fair chance to both captains. What would be the idea of Dhoni?

81. 23 people are there, they are shaking hands together, how many hands shakes possible, if they are in pair of cyclic sequence.

82.10 men and 10 women are there, they dance with each other , is there possibility that 2 men are dancing with same women and vice versa.

83. A lady took out jacket and gloves , which are available in blue 26,yellow 30 and red

56.Power goes off, she can distinguish between gloves and jacket but not in colors. What's the possibility their she will pick up pair of gloves of each color?

84. Sangakara and Ponting selects batting by using a dice , but dice is biased so to resolve Ponting takes out a coin, what is the probability that dice shows correct option?

85. In school there are some bicycles and 4 wheeler wagons. One Tuesday there are 58 wheels in the campus. How many bicycles are there?

86. Two bowls are taken , one contains water and another contains tea. One spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl. Which statement will hold good for the above?

87. From 8 digit numbers from by using 1,2,3,4,5 with repetition is allowed and must be divisible by 4?

(a) 31250 (b) 97656 (c) 78125 (d) 97657

88.  $(a^3 - b^3) / (a^2 + ab + b^2)$

89. A lies on mon, tues, wed and speak truths on other days, B lies on thur,fri,sat and speaks truths on other days. One day a said I lied today and B said I too lied today. What is the day?

90. $(1/2)$  of a number is 3 times more than the  $91/6$  of the same number?

91. There are two pipes A and B , if A filled 10 liters in hour B can fills 20 liters in same time. Likewise B can fill 10, 20, 40, 80,160....., if b filled in  $(1/16)$  the of a tank in 3 hours , how much time will it take to fill completely.?

92. One question has last part like difference between two terms is 9 and product of two numbers is 14, what is the squares of sum of numbers?

93. A man is standing before a painting of a man and he says I have no bro and sis and his father is my father's son?

94. What is the value of  $[(3x+8y)/(x-2y)]$ , if  $x/2y=2$ ?

95. One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

96. In a market 4 man are standing, the average age of the four before 4 years is 45,after some days one man is added and age is 49, what is the average age of all?

97. In a school for a student out of a 100 he got 74 of average for 7 subjects and he got 79 marks in 8th subject, what is the average of all the subjects?

98. The ages of two people has the ratio of 6:5 and by adding the numbers we get 44, after how many years the ratio would be 8:7?

99. Two years before Paul's age is 2 times the Alice age and the present age of Paul is 6 times the Alice. What is the presents Paul's age?

100. One train travels 200m from A to B with 70km/hr and returns to A with 80kmph, what is the average of their speed?

101. A man whose age is 45 years has 3 sons named John, Jill, Jack, he went to a park weekly twice , he loves his sons very much. On a certain day he find # shopkeepers sailing different things. An apple cost 1 penny,2 chocolates costs 1penny&3 bananas cost 1 penny, he has bought equal no of apples, chocolate & banana for each son. If the total amount he invest is 7 penny then how many he has bought from each piece for his son?

- (a) 1 app,1 cho,1 banana
- (b) 1 app,2cho,3 bananas
- (c) 1app,2cho,1 banana
- (d) 2app,2cho,2 bananas

102. A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he traveled 1 mile in north direction & reached at north pole, there he saw a bear, he then followed the bear around 1 hr with a speed of 2kmph in east direction , after that he traveled in south direction & reached at his lab min 2 hrs. Then what is the color of the bear?

- (a) white (b) black (c) gray (d) brown

103. How many 9 digit numbers are possible by using the digits 1,2,3,4,5, which are divisible by 4 if repetition of digits is allowed?

104. 3 persons a,b,c were there A always says truth , B lies on Monday, Tuesday & Wednesday, but C lies on Thursdays, Friday & Saturday, one Das A said that B & C said to A that B said yesterday way one of the days when I lies said that yesterday way one of the days when I lies too, then which day was that?

105. A girl has to make pizza with different toppings . There are 8 different toppings, in how many ways can she make pizzas with 2 different toppings.

106. Peter& Paul are two friends . The sum of their ages is 35 years . Peter is twice as old as Paul was when Peter was as old as Paul is now . What is the present age of Peter?

107. 2 pots are there , 1st pot is filled with ink and 2nd pot is filled with water, take 1 spoon of ink from 1st pot and pore it in 2nd pot and take 1 spoon of mixture from 2nd pot and pore it in 2nd then which one of following is true?

108. There are ten spots in library and each spot has 4 tables and ten readers are there, 10 students come into library and want 2 studies in how many ways that they sit in d library so that no chair would be blank?

109. There is a toy train that can make 10m musical sounds . It makes 2 musical sounds after being defective . What is the probability that same musical sound would be produced 5 times consecutively?( 1 of \_\_\_\_\_)?

110. There are 5 materials to make a perfume ,Lilac,Balsalmic,Lemon,Woody and Mimosaic, To make a perfume that is in demand the following conditions are to be followed :Lilac and Balsalmic go together,Woody and Mimisaic go together,woody and Balsalmic never go together. Lemon can be added with any material. All of the following combinations are possible to make a perfume EXCEPT.

- (a) balsalmic and lilac
- (b) Woody and Lemon
- (c) Mimosaic and lilac

(d) Mimosaic and Lilac

111. A triangle is made from a rope . The sides of the triangle are 25 cm, 11 cm, and 31 cm.

What will be the area of the square made from the same rope?

112. What is the distance between the Z-intercept from the X-intercept in the equation  $ax+by+cz+d=0$ .

113. An athlete decides to run the same distance in  $\frac{1}{4}$  the less time that she usually took. By how much percent will she have to increase her average speed?

114. Two pipes A and B fill at A certain rate B is filled at 10,20,40,80, if  $\frac{1}{16}$  of B if filled in 17 hours what time it will take to get completely filled .

115. In a shopping mall with a staff of 5 members the average age is 45 years. After 5 years a person joined them and the average age is again 45 years . What's the age of the 6th person?

116. Find  $(4x+2y)/(4x-2y)$  if  $x/2y=2$ ?

117. Find the average speed if a man travels at speed of 24kmph up and 36kmph down at an altitude of 200 m. Formula is  $2xy/(x-y)$ .

118. Six friends go to pizza corner there are 2 types of pizzas and six different flavors are there they have to select 2 flavors from 6 flavors in how many ways we can select?

119. 3 friends A,B,C went for week end party to McDonald's restaurant and there they measure there weights in some order In 7 rounds.A:B:C,AB:BC,AC:ABC. Final round measure is 155 kg then find the average weight of all the 7 rounds?

120. There is a toy train that can make 10 musical sounds . It makes 2 musical sounds after being defective. What is the probability that same musical sound would be produced 5 times consecutively?(1 of )?

121. What is the distance of the z-intercept from the x-intercept in the equation  $ax+by+cz=d$  ( I do not remember the values of a,b,c,d)

122. A scientist in Antarctic region conducts research on bears came to know that bears changes according to the location . Once he moves 1 mile towards north, then he moves 2 miles towards east, then 1 mile towards south. Now the color of bear he found will be in:

123.  $\frac{91}{30}$  of a number is 3 times more than the  $(\frac{1}{60}$  of the same number)?

124. There are 11 Boys in a family . Youngest child is a boy . What is the probability of all are boys?

(a) 2 (b) 2! (c) 2048 (d) 1024

125. A boy bought a roll A of 56 inches wide and 141 yards long. He also bought B of 77 inches wide of length 333 yards. Time taken for cutting A into 1 yard piece is 2 seconds. Time taken to cut into 141 pieces of 1 yard each is?

126. A person buys a horse for 15 ponds after one year he sells it for 20 pounds .After one year , again he buys the same horse at 30 pounds and sells it for 40 pounds. What is the profit for that person?

127. John buys a cycle for 31 dollars and given a cheque of amount 35 dollars. Shop keeper exchanged the cheque with his neighbor and gave change to John. After 2 days it is known that cheque is bounced. Shop keeper paid the amount to his neighbor. The cost price of cycle is 19 dollars. What is the profit/loss for shop keeper?

128. In a family there are some boys and girls. All boys told that they are having equal no of brothers and sisters and girls told that they are having twice the no. of brothers than sisters. How many boys and girls present in a family?

129. There are certain number of hats and gloves in box. They are of 41 red, 23 green, 11 orange. But a woman can differentiate between hats and gloves. How many draws are required to obtain

a pair of each color?

130. 2 years ago of A is x times that of B. 3 years hence the age of A is  $\frac{4}{3}$  times of B. What is the present age of B in binary form?

131. A metal strip of width x cm, 2 metal strips are placed one over the other, then the combined length of 2 strips is y , if z strips are placed in that number manner. What is the final width of that arrangement?

132. There are 100 men and 100 women on the dance floor. They want to dance with each other. Then which of the following statements is always true:

- (a) There are 2 men who danced with equal no. of women's
- (b) There are 2 women who danced with equal no of men

133. A game is played between 2 players and one player is declared as winner. All the winners from first round are played in second round. All the winners from second round are played in third round and so on. If 8 rounds are played to declare only one player as winner, how many players are played in first round.

134. There are 3 boys A,B,C and 2 girls D,E,D always sit right to A, Girls never sit in extreme positions and in the middle position always sits in the extreme positions. Who is sitting immediate right to E?

135. 49 members attended the party, in that 22 are males, 17 are females. The shake hands between males, females, male and female. Total 12 people given shake hands. How many such kinds of such shake hands are possible?

136. Entry ticket to an exhibition ranges from 1p to 31p. You need to provide exact change at the counter. You have 31p coin. In how many parts will you divide 31p so that you will provide that exact change required and carry as less coins as possible?

- (a) 22 (b) 31 (c) 6 (d) 32

137. There are 2 friends Peter and Paul, Peter age is twice as old as Paul when Peter was as old as Paul is now. Sum of the present ages of Peter and Paul is 35. What is the present age of Peter?

138. A lady took out jacket and gloves, which are available in blue 26, yellow 30 and red

56.Power goes off, she can distinguish between gloves and jacket but not in color. What's the possibility their she will pick up pair of gloves of each color.

139. Two bowls are taken, one contains water and another contains tea. One spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl.

Which statement will hold good for the above

140. One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

141.10 men and 10 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa.

142. Two bowls are taken, one contains water and another contains tea. One spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl. Which statement will hold good for the above.

143. From 8 digit number from by using 1,2,3,4,5 with repetition is allowed and must be divisible by 4?

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144. One question has last part like difference between two terms is 9 and product of two numbers is 14.What is the square of the sum of numbers?

145. One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

146. In a market 4 men are standing. The average age of the four before 4 years is 45, after some days one man is added and his age is 49. What is the average weight of all?

147. In a school for a student out of a 100 he got 74 of average for 7 subjects and he got 79 marks in 8th subject. What is the average of all the subjects?

149. One train travels 200 m from A to B with 70 km/ph and returns to A with 80 km/ph, what is the average of their speed?

150. There are 10 reading spots in a room. Each reading spot has a round table .Each round table has 4 chair; if different no of persons are sitting at each reading spot. And if there are 10 persons inside the room then how many reading spots do not have at least a single reader.

(a) 5 (b) 6 (c) 7 (d) None

151. A person does rock climbing at an altitude of 800 m. He goes up by 7mph and come down by 9 mph.What was his average speed.

152. A boy want to make a cuboid of dimension 5m,6m,7m from small cubes of .03 m<sup>3</sup>.later he realized ,he can make same cuboid by making it hollow. Then it take some cubes less. What is the no of these cube.

153. Two years ago A was 6 times older than B . Now he is 2 times older than B. What is the age of A.

154. What is the value of  $(78*78*78*-45*45*45)/(78*78+78*45+45*45)$

155. In a shopping mall with a staff of 5 members the average age is 45 years. After 5 years a person joined them and the average age is again 45 years . What is the age of 6th person?

156. Find  $(4x+2y)/(4x-2y)$  if  $x/2y=2$

157.Find the average speed if a man travels at speed of 24kmph up and 36 kmph down at an altitude of 200m, formula is  $2xy/(x+y)$

158. A triangle is made from a rope .The sides of the triangle are A cm,B cm& C cm. What will be the area of the square made from the same rope?

159. What is the distance of the z-intercept from the x-intercept in the equation  $ax+by+cz=d$  ( I do not remember the values of a,b,c,d)

160. A scientist in Antarctic region conducts research on bears came to know that bears changes according to the location. Once he moves 1 mile towards north, then he moves 2 miles towards east, then 1 mile towards south . Now the color of bear he found will be in.

161.  $(1/3)$  of a number is 3 times more than the  $(1/6)$  of the same number?

162. There are 11 boys in a family .Youngest child is a boy . What is the probability of all are boys.

(a) 2 (b) 2! (c) 2048 (d) 1024

163. A boy bought a roll A of 56 inches wide and 141 yards long. He also bought B of 77 inches wide of length 333 yards. We don't want any details of B. Final question is time taken for cutting A into 1 yard piece is 2 seconds. Time taken to cut into 141 piece of 1 yard each is?

164. A person buys a horse for 15 ponds, after one year he sells it for 20 pounds, after one year, again he buys the same horse at 30 pounds and sells for 40 pounds. What is the profit for that person?

165. John buys a cycle for 31 dollars and given a cheque of amount 35 dollars. Shop Keeper exchanged the cheque with his neighbor and gave change to john. After 2 days, it is known that cheque is bounded .Shop Keeper paid the amount to his neighbor. The cost price of cycles is 19

dollars. What is the profit/loss for shopkeeper?

166. There is a die with 10 faces .It is not known that fair or not 2 captains want to toss die for batting selection. What is the possible solution among the following?

- (a) if no. is odd it is head, if no is even it is tails
- (b) if no is odd it is tail, if no is even it is head
- (c) Toss a die until all the 10 digits appear on top face.

167. In a family there are some boys and girls. All boys told that they are having equal no of brothers and sisters and girls told that they are having twice the no of brothers than sisters. How many boys and girls present in a family?

168. 2 years ago of A is x times that of B. 3 years hence the age of A is  $\frac{4}{3}$  times of B. What is the present age of B in binary form?

169. A metal strip of width x cm, 2 metal strips are placed one over the other, then the combined length of 2 strips is y , if z strips are placed in that number manner. What is the final width of that arrangement?

170. There are 100 men and 100 women on the dance floor. They want to dance with each other. Then which of the following statements is always true:

- (a) There are 2 men who danced with equal no. of women's
- (b) There are 2 women who danced with equal no of men

171. A game is played between 2 players and one player is declared as winner. All the winners from first round are played in second round. All the winners from second round are played in third round and so on. If 8 rounds are played to declare only one player as winner, how many players are played in first round.

172. There are 3 boys A,B,C and 2 girls D,E,D always sit right to A, Girls never sit in extreme positions and in the middle position always sits in the extreme positions. Who is sitting immediate right to E?

173. 49 members attended the party, in that 22 are males, 17 are females. The shake hands between males, females, male and female. Total 12 people given shake hands. How many such kinds of such shake hands are possible?

174. There are 1000 pillars for a temple 3 friends Linda, Chelsey, Juli visited that temple, Linda is taller than Chelsey and taller than 2 of 1000 pillars Juli is shorter than Linda. Find the correct sentence?

- (a)Linda is shorter among them
- (b) Chelsey is taller than Juli
- (c) Chelsey is shorter than Juli
- (d) Cannot determine who is taller among Chelsey and Juli.

175. Entry ticket to an exhibition ranges from 1p to 31p. You need to provide exact change at the counter. You have 31p coin. In how many parts will you divide 31p so that you will provide that exact change required and carry as less coins as possible?

- (a) 22 (b) 31 (c) 6 (d) 32

### SET : 3

1. Alok and Bhanu play the following min-max game. Given the expression  $N=40+X+Y-Z$ , where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next

value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be

- (a) 49 (b) 51 (c) 31 (d) 58

2. The IT giant Tirnop has recently crossed a head count of 150000 and earnings of \$7 billion. As one of the forerunners in the technology front, Tirnop continues to lead the way in products and services in India. At Tirnop, all programmers are equal in every respect. They receive identical salaries and also write code at the same rate. Suppose 14 such programmers take 14 minutes to write 14 lines of code in total. How long will it take 5 programmers to write 5 lines of code in total ?

- (a) 19 (b) 5 (c) 14 (d) 70

3. 14 people meet and shake hands. The maximum number of handshakes possible if there is to be no ‘cycle’ of handshakes is (A cycle of handshakes is a sequence of people  $a_1, a_2, \dots, a_k$ ,  $k > 2$  such that the pairs  $\{a_1, a_2\}, \{a_2, a_3\}, \dots, \{a_{(k-1)}, a_k\}, \{a_k, a_1\}$  shake hands).

- (a) 11 (b) 12 (c) 10 (d) 13

4. 45 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true? A. All the suspects are lying. B. The leftmost suspect is guilty. C. The rightmost suspect is guilty.

- (a) A only
- (b) A and C
- (c) B only
- (d) A and B

5. The dynamics of crowd behaviour are hard to study because usually people are not reliable witnesses of their own behaviour. Now consider 4 people standing in the queue of a supermarket. You want to predict their behaviour based on their age group. You get to know from the supermarket records that their average age 4 years ago was 43 years. After a while, another person joins the queue and the present average of all the 5 is 40 years. The present age of the last person in the queue is :

- (a) 28 years (b) 12 years (c) 32 years (d) 24 years

6. One day Snow-white meets Pal and Unicorn in the Fairyland. She knows the Pal lies on Mondays, Tuesdays and Wednesdays, and tells the truth on the other days of the week. Unicorn, on the other hand, lies on Thursdays, Fridays and Saturdays, but tells the truth on the other days of the week. Now they make the following statements to Snow-white – Pal: Yesterday was one of those days when I lie. Unicorn: Yesterday was one of those days when I lie too. What day is it?

- (a) Tuesday
- (b) Monday
- (c) Thursday
- (d) Sunday

7. The Barnes Foundation in Philadelphia has one of the most extra-ordinary and idiosyncratic collections in French impressionist art. Dr. Barnes who put together this collection has insisted that the paintings be hung in a particular manner specified by him at a museum designed by the French architect Paul Philippe Cret who also designed the Rodin Museum. The museum has, say, seven galleries – Eugene Boudin, Cassatt, Boudin, Forain, Gonzales, Manet and Monet. Visitors

reach the main Eugene Boudin by an elevator, and they can enter and leave the exhibition only through Eugene Boudin gallery. Once inside, visitors are free to move as they choose. The following list includes all of the doorways that connect the seven galleries: There is a doorway between Eugene Boudin and Cassatt, a doorway between Eugene Boudin and Boudin, and a doorway between Eugene Boudin and Gonzales galleries. There is a doorway between Cassatt and Boudin galleries. There is a doorway between Gonzales and Forain and a doorway between Gonzales and Manet galleries. There is a doorway between Manet and Monet galleries. Which of the following rooms CANNOT be the third gallery that any visitor enters ?

- (a) Monet (b) Boudin (c) Forain (d) Cassatt

8. Mr. Beans visited a magic shop and bought some magical marbles of different colours along with other magical items. While returning home whenever he saw a coloured light, he took out marbles of similar colours and counted them. So he counted the pink coloured marbles and found that he has bought 25 of them. Then he counted 14 green marbles and then 21 yellow marbles. He later counted 30 purple coloured marbles with him. But when he reached a crossing, he looked at a red light and started counting red marbles and found that he had bought 23 Red marbles. As soon as he finished counting, it started raining heavily and by the time he reached home he was drenched. After reaching home he found that the red, green and yellow marbles had magically changed colours and became white, while other marbles were unchanged. It will take 1 day to regain its colours, but he needs to give atleast one pair of marbles to his wife now. So how many white marbles must be choose and give to his wife so as to ensure that there is atleast one pair of red, yellow and green marbles ?

- (a) 46 (b) 35 (c) 29 (d) 48

9. A greengrocer was selling watermelon at a penny each, chickoos at 2 for a penny and peanuts at 3 for a penny. A father spent 7p and got the same amount of each type of fruit for each of his three children, Jane, Joe and Jill. Jane is three years older than Jill and Joe is exactly half the age of Jane and Jill together. What did each child get ?

- (a) 1 watermelon, 3 chickoos, 2 peanuts  
(b) 1 watermelon, 1 chickoo, 1 peanut  
(c) 1 watermelon, 2 chickoos, 2 peanuts  
(d) 1 watermelon, 2 chickoos, 1 peanut

10. Given 3 lines in the plane such that the points of intersection from a triangle with sides of length 20, 20 and 20, the number of points equidistant from all the 3 lines is

- (a) 4 (b) 3 (c) 0 (d) 1

11. 33 people  $\{a_1, a_2, \dots, a_{33}\}$  meet and shake hands in a circular fashion. In other words, there are totally 33 handshakes involving the pairs,  $\{a_1, a_2\}, \{a_2, a_3\}, \dots, \{a_{32}, a_{33}\}, \{a_{33}, a_1\}$ . Then the size of the smallest set of people such that the rest have shaken hands with at least one person in the set is

- (a) 10 (b) 11 (c) 16 (d) 12

12. Consider two vessels, the first containing one liter of water and the second containing one liter of pepsi. Suppose you take one glass of water out of the first vessel and pour it into the second vessel. After mixing you take one glass of the mixture from the second vessel and pour it back into the first vessel. Which one of the following statements holds now?

- (a) None of the statements holds true.  
(b) There is less Pepsi in the first vessel than water in the second vessel.  
(c) There is more Pepsi in the first vessel than water in the second vessel.  
(d) There is as much Pepsi in the first vessel as there is water in the second vessel.

13. Amok is attending a workshop ‘How to do more with less’ and today’s theme is Working with fewer digits. The speakers discuss how a lot of miraculous mathematics can be achieved if mankind (as well as womankind) had only worked with fewer digits. The problem posed at the end of the workshop is ‘How many 10 digit numbers can be formed using the digits 1, 2, 3, 4, 5 (but with repetition) that are divisible by 4?’ Can you help Amok find the answer?

- (a) 1953125
- (b) 781250
- (c) 2441407
- (d) 2441406

14. For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A’s chances of winning. Let’s assume such rumors to be true and that in a match between Ghana and Bolivia, Ghana the stronger team has a probability of  $\frac{11}{12}$  of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?

- (a) .92 (b) .01 (c) .85 (d) .15

15. There are two boxes, one containing 39 red balls and the other containing 26 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is

- (a) .60 (b) .50 (c) .80 (d) .30

16. After the typist writes 40 letters and addresses 40 envelopes, she inserts the letters randomly into the envelopes (1 letter per envelope). What is the probability that exactly 1 letter is inserted in an improper envelope?

- (a)  $1 - \frac{1}{40}$
- (b)  $\frac{1}{40}$
- (c)  $\frac{1}{401}$
- (d) 0

17. A hare and a tortoise have a race along a circle of 100 yards diameter. The tortoise goes in one direction and the hare in the other. The hare starts after the tortoise has covered  $\frac{1}{3}$  of its distance and that too leisurely. The hare and tortoise meet when the hare has covered only  $\frac{1}{4}$  of the distance. By what factor should the hare increase its speed so as to win the race?

- (a) 4
- (b) 3
- (c) 12
- (d) 5.00

18. A sheet of paper has statements numbered from 1 to 20. For each value of n from 1 to 20, statement n says ‘At least n of the statements on this sheet are true.’ Which statements are true and which are false?

- (a) The odd numbered statements are true and the even numbered are false.
- (b) The first 13 statements are false and the rest are true.
- (c) The first 6 statements are true and the rest are false.
- (d) The even numbered statements are true and the odd numbered are false.

19. The question is followed by two statements, A and B. Answer the question using the following instructions: Choose 1: if the question can be answered by using one of the statements alone but not by using the other statement alone. Choose 2: if the question can be answered by

using either of the statements alone. Choose 3: if the question can be answered by using both statements together but not by either statement alone. Choose 4: if the question cannot be answered on the basis of the two statements. Zaheer spends 30% of his income on his children's education, 20% on recreation and 10 % on healthcare. The corresponding percentages for Sandeep are 40%, 25% and 13%. Who spends more on children's education? A" Zaheer spends more on recreation than Sandeep B: Sandeep spends more on healthcare than Zaheer.

- (a) 3 (b) 2 (c) 1 (d) 4

20. Subha Patel is an olfactory scientist working for International Flavors and Fragrances. She specializes in finding new scents recorded and reconstituted from nature thanks to Living Flower Technology. She has extracted fragrance ingredients from different flowering plants into bottles labeled herbal, sweet, honey, anisic and rose. She has learned that a formula for a perfume is acceptable if and only if it does not violate any of the rules listed: If the perfume contains herbal, it must also contain honey and there must be twice as much honey as herbal. If the perfume contains sweet, it must also contain anisic, and the amount of anisic must equal the amount of sweet. honey cannot be used in combination with anisic. anisic cannot be used in combination with rose. If the perfume contains rose, the amount of rose must be greater than the total amount of the other essence or essences used. Which of the following could be added to an unacceptable perfume consisting of two parts honey and one part rose to make it acceptable?

- (a) Two parts rose  
(b) One part herbal  
(c) Two parts honey  
(d) One part sweet

21. The citizens of planet Oz are 6 fingered and thus have developed a number system in base 6. A certain street in Oz contains 1000 buildings numbered from 1 to 1000. How many 3's are used in numbering these buildings? Express your answer in base 10.

- (a) 144  
(b) 54  
(c) 108  
(d) 36

22. Recent reports have suggested that sportsmen with decreased metabolic rates perform better in certain sports. After reading one such report, Jordan, a sportsperson from Arlington decides to undergo a rigorous physical training program for 3 months, where he performs Yoga for 3 hours, walks for 2 hours and swims for 1 hour each day. He says: I began my training on a Wednesday in a prime number month of 2008. I lost 1% of my original weight within the first 30 days. In the next two months combined, I lost 1 Kg. If he walks at 5 mph over a certain journey and walks back over the same route at 7 mph at an altitude of 200 meters, what is his average speed for the journey?

- (a) 5.83  
(b) 2.92  
(c) 6.00  
(d) 35.00

23. A schoolyard contains only bicycles and 4 wheeled wagons. On Tuesday, the total number of wheels in the schoolyard was 134. What could be possible number of bicycles?

- (a) 16 (b) 15 (c) 18 (d) 14

24. A sheet of paper has statements numbered from 1 to 20. For all values of n from 1 to 20, statement n says: 'Exactly n of the statements on this sheet are false.' Which statements are true

and which are false?

- (a) The even numbered statements are true and the odd numbered statements are false.
- (b) All the statements are false.
- (c) The odd numbered statements are true and the even numbered statements are false.
- (d) The second last statement is true and the rest are false.

25. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of one litre every hour in A, it gets filled up like 10, 20, 40, 80, 160 ..in tank B. (At the end of first hour, B has 10 litres, second hour it has 20, and so on). If tank B is  $\frac{1}{8}$  filled after 5 hours, what is the total duration required to fill it completely?

- (a) 9 hours
- (b) 7 hours
- (c) 3 hours
- (d) 8 hours

26. A hollow cube of size 5 cm is taken, with a thickness of 1 cm. It is made of smaller cubes of size 1 cm. If 4 faces of the outer surface of the cube are painted, totally how many faces of the smaller cubes remain unpainted?

- (a) 900
- (b) 488
- (c) 500
- (d) 800

27. Alice and Bob play the following coins-on-a-stack game. 100 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack. Alice starts and the players take turns. A turn consists of moving the coin on the top to a position I below the top coin (for some I between 0 and 100). We will call this an i-move (thus a 0-move implies doing nothing). The proviso is that an i-move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coin is the third coin from the top. Then

- (a) In order to win, Alice's first move should be a 1-move.
- (b) In order to win, Alice's first move should be a 0-move.
- (c) Alice has no winning strategy.

• In order to win, Alice's first move can be a 0-move or a 1-move.

28. The teacher is testing a student's proficiency in arithmetic and poses the following question:  
 $\frac{1}{2}$  of a number is 3 more than  $\frac{1}{6}$  of the same number. What is the number?

Can you help the student find the answer?

- 9
- 8
- 10
- 3

29. A circular dashboard of radius 1.0 foot is at a distance of 20 feet from you. You throw a dart at it and it hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

- 1.00
- .75
- .25

• .50

30. A result of global warming is that the ice of some glaciers is melting. 13 years after the ice disappears, tiny plants, called lichens, start to grow on the rocks. Each lichen grows approximately in the shape of a circle. The relationship between the diameter of this circle and the age of the lichen can be approximated with the formula:  $d=10*(t - 13)$  for  $t > 13$ , where  $d$  represents the diameter of the lichen in millimeters, and  $t$  represents the number of years after the ice has disappeared. Using the above formula, calculate the diameter of the lichen, 45 years after the ice has disappeared.

- 450
- 437
- 13
- 320

31. 25 people meet and shake hands. The maximum number of handshakes possible if there is to be no ‘cycle’ of handshakes is (A cycle of handshakes is a sequence of people  $a_1, a_2, \dots, a_k$ ,  $k \geq 2$  such that pairs  $\{a_1, a_2\}, \{a_2, a_3\}, \dots, \{a_{(k-1)}, a_k\}, \{a_1, a_1\}$  shake hands).

- 24
- 22
- 21
- 23

32. Consider two cans, the first containing one litre of water and the second containing one litre of Pepsi. Suppose you take one cup of water out of the first can and pour it into the second can. After mixing you take one cup of the mixture from the second can and pour it back into the first can. Which one of the following statements holds now?

- There is less Pepsi in the first can than water in the second can.
- There is more Pepsi in the first can than water in the second can.
- None of the statements holds true.
- There is as much Pepsi in the first can as there is water in the second can.

33. A greengrocer was selling orange at a penny each, olives at 2 for a penny and grapes at 3 for a penny. A father spent 7p and got the same amount of each type of fruit for each of his three children, Jane, Joe, and Jill. Jane is three years older than Jill and Joe is exactly half the age of Jane and Jill together. What did each child get?

- 1 orange, 2 olives, 2 grapes
- 1 orange, 3 olives, 2 grapes
- 1 orange, 1 olive, 1 grape
- 1 orange, 2 olives, 1 grape

34. A sheet of paper has statements numbered from 1 to 20. For each value of  $n$  from 1 to 20, statement  $n$  says ‘At least  $n$  of the statements on this sheet are true.’ Which statements are true and which are false?

- The even numbered statements are true and the odd numbered are false
- The first 13 statements are false and the rest are true.
- The first 6 statements are true and the rest are false.
- The odd numbered statements are true and the even numbered are false.

35. 45 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true? A. All the suspects are lying. B. The leftmost suspect is guilty. C. The

rightmost suspect is guilty.

- A and C
- A and B
- A only
- B only

36. Ferrari S.P.A. is an Italian sports car manufacturer base in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored driver and manufactured race cars before moving into production of street – legal vehicles in 1947 as Ferrari S.p.A.. Throughout its history, the company has bee noted for its continued participation in racing, especially in Formula One, where it has enjoyed great success. Rohit once brought a Ferrari. It could go 2 times as fast as Mohit's old Mercedes. If the speed of Mohit's Mercedes is 40 Km/hr and the distance traveled by the Ferrari is 913 Km, find the total time taken for Rohit to drive the distance.

- 12 Hours
- 22 Hours
- 456 Hours
- 11.41 Hours

37. The teacher is testing a student's proficiency in arithmetic and poses the following question: 1/3 of a number is 6 more than 1/6 of the same number. What is the number?

Can you help the student find the answer?

- 35
- 6
- 37
- 36

38. Recent report have suggested that sportsmen with decreased metabolic rates perform better in certain sports. After reading one such report, Jordon, a sportsperson from Arlington decides to undergo a rigorous physical training program for 3 months, where he performs Yoga for 3 hours, walks for 2 hours and swims for 1 hour each day. He says: I began my training on a Wednesday in a prime number month of 2008. I lost 1% of my original weight within the first 30 days. In the next two months combined, I lost 1 Kg. If he walks at 5 mph over a certain journey and walks back the same route at 8 mph at an altitude of 200 meters, what is his average speed for the journey?

- 6.15
- 3.08
- 6.50
- 26.67

39. The result of global warming is the ice of some glaciers is melting. 19 years after the ice disappears, tiny planets, called lichens, start to grow on the rock. Each lichen grows approximately in the shape of a circle. The relationship between the diameter of the circle and the age of the lichen can be approximated with the formula:  $d = 12 * (t - 19)$  for  $t > 19$ , where d represents the diameter of the lichen in millimeters, and t represents the number of years after the ice has disappeared. Using the above formula, calculate the diameter of the lichen, 32 years after the ice has disappeared.

- 384

- 156
- 19
- 365

40. There are two boxes, one contains 12 red balls and the other containing 47 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is:

- .59
- .20
- .10
- .50

41. The citizens of planet Oz are fingered and thus have developed a number system in base 6. A certain street in Oz contains 1000 buildings numbered from 1 to 1000. How many 2's are used in numbering these buildings? Express your answer in base 10.

- 144
- 24
- 108
- 36

42. The question is followed by two statements, A and B. Answer the question using the following instructions: Choose1: if the question can be answered by using one of the statements alone but not by using the other statement alone. Choose2: if the question can be answered by using either of the statements alone. Choose3: if the question can be answered by using both statements together but not by either statement alone. Choose4: if the question cannot be answered on the basis of the two statements. Zayed spends 30% of his income on his children's education, 20% on recreation and 10% on healthcare. The corresponding percentage for Sandeep are 40%, 25% and 13%. Who spends more on children's education? A: Zayed spends more on recreation than Sandeep B: Sandeep spends more on healthcare than Zayed.

- 4
- 3
- 2
- 1

43. The question is followed by two statements, A and B. Answer the question using the following instructions: Choose1: if the question can be answered by using one of the statements alone but not by using the other statement alone. Choose2: if the question can be answered by using either of the statements alone. Choose3: if the question can be answered by using both statements together but not by either statement alone. Choose4: if the question cannot be answered on the basis of two statements. Tarun is standing 2 steps to the left of a green mark and 3 steps to the right of a black mark. He tosses a coin. If it comes up heads, he moves one step to the right, otherwise he moves one step to the left. He keeps doing this until he reaches one of the two marks, and then he stops. At which mark does he stops? A: he stops at 21 coin tosses. B: he obtains three more tails than heads.

- 1

- 3
- 4
- 2

44. There are two water tank A and B, A is much smaller than B. While water fills at rate of one liter every hour in A, it gets filled up like 10, 20, 40, 80, 16..in tank B. (At the end of first hour, B has 10 litres, second hour it has 20, and so on). If tank B is 1/8 filled after 7 hours, what is the total duration required to fill it completely?

- 10 hours
- 9 hours
- 11 hours
- 3 hours

45. A sheet of paper has statements numbered from 1 to 10. For all values of n from 1 to 10, statement n says: ‘Exactly n of the statements on this sheet are false.’ Which statements are true and which are false?

- The even numbered statements are true and the odd numbered statements are false.
- The second last statement is true and the rest are false.
- The odd numbered statements are true and the even numbered statements are false.
- All the statements are false.

46. Alok is attending a workshop ‘How to do more with less’ and today’s theme is working with fewer digits. The speakers discuss how a lot of miraculous mathematics can be achieved if mankind (as we as womankind) had only worked with fewer digits. The problem posed at the end of the workshop is ‘How many 6 digit numbers can be formed using the digits 1,2,3,4,5, (but with repetition) that are divisible by 4?’ Can you help Alok find the answer?

- 3906
- 3907
- 3125
- 1250

47. The dynamics of crowd behaviour are hard to study because usually people are not reliable witness of their own behaviour. Now consider 4 people standing in the queue of a supermarket. You want to predict their behaviour based on their age group. You get to know from the supermarket records that their average age 3 years ago was 48 years. After a while, another person joins the queue and the present average of all the 5 is 46 years. The present age of the last person in the queue is:

- 38 years
- 35 years
- 41 years
- 26 years

48. Alice and Bob play the following coins-on-a-stack game. 100 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top of the repeatedly moving the topmost coin to another position in the stack. Alice starts and the players take turns. A turn consists of moving the coin on the top to a position I below the top coin (for some I between 0 and 100). We will call this as i-move (thus a 0-move implies doing nothing). The proviso is that an i-move cannot be repeated, for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happen to be on the top when it’s a player’s turn then the player wins the game.

Initially, the gold coin is the third coin from the top. Then

- In order to win, Alice's first move should be a 1-move.
- Alice has no winning strategy.
- In order to win, Alice's first move can be a 0-move or a 1-move.
- In order to win, Alice's first move should be a 0-move.

49. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of one litre every hour in A, it gets filled up like 10, 20, 40, 80, 160 ..in tank B. (At the end of first hour, B has 10 litres, second hour it has 20, and so on). If tank B is  $\frac{1}{16}$  filled after 16 hours, what is total duration required to fill it completely?

- 19 hours
- 20 hours
- 4 hours
- 21 hours

50. Consider two tumblers, the first containing one litre of milk and the second containing one litre of coffee. Suppose you take one glass of milk out of the first tumbler and pour it into the second tumbler. After mixing you take one glass of the mixture from the second tumbler and pour it back into the first tumbler. Which one of the following statements holds now?

- None of the statements holds true.
- There is less coffee in the first tumbler than milk in the second tumbler.
- There is as much coffee in the first tumbler as there is milk in the second tumbler.
- There is more coffee in the first tumbler than milk in the second tumbler.

51. A circular dashboard of radius 2.0 foot is at a distance of 20 feet from you. You throw a dart at it and it hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

- .75
- 1.00
- .25
- .50

52. A sheet of paper has statements numbered from 1 to 10. For all values of n from 1 to 10, statement n says: 'Exactly n of the statements on this sheet are false.' Which statements are true and which are false?

- All the statements are false.
- The second last statement is true and the rest are false.
- The even numbered statements are true and the odd numbered statements are false.
- The odd numbered statements are true and the even numbered statements are false.

53. Consider two vessels, the first containing one litre of oil and the second containing one litre of coffee. Suppose you take one spoon of oil out of the first vessel and pour it into the second vessel. After mixing you take one spoon of mixture from the second vessel and pour it back into the first vessel. Which one of the following statements holds now?

- None of the statements holds true.
- There is less coffee in the first vessel than oil in the second vessel.
- There is more coffee in the first vessel than oil in the second vessel.
- There is as much coffee in the first vessel as there is oil in the second vessel.

54. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of one litre every hour in A, it gets filled up like 10, 20, 40, 80, 160 ..in tank B. (At the end of first hour, B has 10 litres, second hour it has 20, and so on). If tank B is  $\frac{1}{32}$  filled after 19 hours,

what is total duration required to fill it completely?

- 5 hours
- 23 hours
- 24 hours
- 25 hours

55. The question is followed by two statements, A and B. Answer the question using the following instructions: Choose1: if the question can be answered by using one of the statements alone but not by using the other statement alone. Choose2: if the question can be answered by using either of the statements alone. Choose3: if the question can be answered by using both statements together but not by either statement alone. Choose4: if the question cannot be answered on the basis of two statements. Zayed spends 30% of his income on his children's education, 20% on recreation and 10% on healthcare. The corresponding percentage for Sandeep are 40%, 25% and 13%. Who spends more on children's education? A: Zayed spends more on recreation than Sandeep B: Sandeep spends more on healthcare than Zayed.

- 1
- 3
- 4
- 2

56. The question is followed by two statements, A and B. Answer the question using the following instructions: Choose1: if the question can be answered by using one of the statements alone but not by using the other statement alone. Choose2: if the question can be answered by using either of the statements alone. Choose3: if the question can be answered by using both statements together but not by either statement alone. Choose4: if the question cannot be answered on the basis of two statements. Tarak is standing 2 steps to the left of a yellow mark and 3 steps to the right of a grey mark. He tosses a coin. If it comes up heads, he moves one step to the right, otherwise he moves one step to the left. He keeps doing this until he reaches one of the two marks, and then he stops. At which mark does he stops? A: he stops at 21 coin tosses. B: he obtains three more tails than heads.

- 2
- 3
- 4
- 1

57. A sheet of paper has statements numbered from 1 to 10. For all values of n from 1 to 10, statement n says: 'Exactly n of the statements on this sheet are false.' Which statements are true and which are false?

- The even numbered statements are true and the odd numbered statements are false.
- The second last statement is true and the rest are false.
- The odd numbered statements are true and the even numbered statements are false.
- All the statements are false.

58. There are two boxes, one contains 47 red balls and the other containing 46 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is

- .75
- .50
- .25

• .51

59. Consider two vessels, the first containing one liter of ink and the second containing one liter of cola. Suppose you take one glass of ink out of the first vessel and pour it into the second vessel. After mixing you take one glass of mixture from the second vessel and pour it back into the first vessel. Which one of the following statements holds now?

- There is as much cola in the first vessel as there is ink in the second vessel.
- None of the statements holds true.
- There is more cola in the first vessel than ink in the second vessel.
- There is less cola in the first vessel than ink in the second vessel.

#### TCS Job Interview Placement Paper : January, 2011

Company Name: TCS

Type: Fresher Job Interview

1. For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A's chances of winning.

Let's assume such rumors to be true and that in a match between X and Y, X the stronger team has a probability of  $\frac{2}{3}$  of winning the game. What is the probability that Paul will correctly pick the winner of the X-Y game?

Ans.  $(\frac{2}{3})^2 + (1 - \frac{2}{3})^2$

2. A circular dart board of radius 1 foot is at a distance of 20 feet from you. You throw a dart at it and it hits the dartboard at some point X in the circle. What is the probability that X is closer to the center of the circle than the periphery?

Ans.  $\pi(\frac{r}{2})^2 / \pi(r)^2$

3. On planet Corba, a solar blast has melted the ice caps on its equator. 8 years after the ice melts, tiny plantoids called echina start growing on the rocks. echina grows in the form of a circle and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4 * (t - 8)$  for  $t \geq 8$

where d represents the diameter in mm and t the number of years since the solar blast.

If you record the radius of some echina at a particular spot as 8mm. How many years back did the solar blast occur?

Ans. simply put  $d=2*r$

4. Given 3 lines in the plane such that the points of intersection form a triangle with sides of length 20, 20 and 30, What is the number of points equidistant from all the 3 lines?

Ans. 4 for 3line

if question say line segment then answer will be 1.

5. 36 people  $\{a_1, a_2, \dots, a_{36}\}$  meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs,  $\{a_1, a_2\}, \{a_2, a_3\}, \dots, \{a_{35}, a_{36}\}, \{a_{36}, a_1\}$ . Find the size of the smallest set of people such that the rest have shaken hands with at least one person in the set.

Ans. simply put  $n/3 = 36/3 = 12$

6. After the typist writes 12 letters and addresses 12 envelopes, he inserts 1 letter per envelope randomly into the envelopes. What is the probability that exactly 1 letter is inserted in an improper envelope?

Ans. 0

7. Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line; i.e. the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . Find the maximum value of  $n_1(P)$  over all configurations P of 19 points in the plane.

Ans. 19

8. A sheet of paper has statements numbered from 1 to 35. For all values of n from 1 to 35, statement n says "At most n of the statements on this sheet are false". Which statements are true and which are false?

Ans. For this type f question

At least-half f the statements are true and remains false.

Exactly-n-1 statements are true and remains false

Almost-all statement r true. In my set this type f question. repeated 3 times.

9. A and B play the following min-max game. Given the expression

$$N = 12 + X^*(Y - Z)$$

where X, Y and Z are variables representing single digits (0 to 9), "A" would like to maximize N while "B" would like to minimize it. Towards this end, "A" chooses a single digit number and "B" substitutes this for a variable of her choice (X, Y or Z). "A" then chooses the next value and "B", the variable to substitute the value. Finally "A" proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be

Ans.  $x-y-z=2$

$x+y-z=11$

$$x^*(y-z)=x^*(y+z)=18$$

10.  $1/3$  of a number is 6 more than  $1/6$  of the same number. What is the number?

Ans. 36

11. Two pipes A and B fill at A certain rate B is filled at 10,20,40,80,. If  $1/16$  of B if filled in 17 hours what time it will take to get completely filled.

Ans. Simply find the factor of 16 count the no. of 2 & add them with 17.

12. Alice and Bob play the following coins-on-a-stack game. 20 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack. Alice starts and the players take turns. A turn consists of moving the coin on the top to a position  $i$  below the top coin ( $0 = i = 20$ ). We will call this an  $i$ -move (thus a 0- move implies doing nothing). The proviso is that an  $i$ -move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coins the third coin from the top

Ans. In order 2 win 1 moves at 1st.

13. A lady has fine gloves and hats in her closet- 18 blue- 32 red and 25 yellow. The lights are out and it is totally dark inspite of the darkness. She can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each colour?

- a. 50
- b. 8
- c. 60
- d. 42

Ans. highest +middle +2

14. 20 people meet and shake hands. The maximum number of hand shakes possible if there is to be no 'cycle' of handshakes is( a cycle of handshake is a sequence of people a<sub>1</sub>,a<sub>2</sub>, ....,a<sub>k</sub>) such that people(a<sub>1</sub>,a<sub>2</sub>),(a<sub>2</sub>,a<sub>3</sub>).....(a<sub>(k-1)</sub>,a<sub>k</sub>),(a<sub>2</sub>,a<sub>1</sub>) shake hand is

Ans. for cyclic-(n-1)  
for non-cyclic-(nc2)

15. The IT giant Tirnop has recently crossed a head count of 150000 and earnings of \$7 billion. As one of the forerunners in the technology front, Tirnop continues to lead the way in products and services in India. At Tirnop, all programmers are equal in every respect. They receive identical salaries answer also write code at the same rate. Suppose 12 such programmers take 12 minutes to write 12 lines of code in total. How many lines of code can be written by 72 programmers in 72 minutes?

Ans. For this types of question ask to find no. of programmer & no. of minute simply put the first digit i.e. 12 in this question but if ask to find no. of line using=(12\*72\*72)/(12\*12) in my set this come 3 times.

16. if there are 30 cans out of them one is poisoned if a person tastes very little he will die within 14 hours so if there are mice to test and 24 hours, how many mice are required to find the poisoned can?

Ans. I don't know exactly but it may be 1

HR question:

1. Tell me about yourself
2. Some basic thing from machine
3. How the signals are control in tower
4. Earthening
5. From data structure sorting
6. Some HR question like if you will select in TCS what the extra work do you want to do?

Exam/Interview Date : 13-Jan-2011

No of Rounds : Technical Round

Contributor Name : JR

Location : Kolkata

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### Latest TCS Fresher Job Interview Paper Pattern 10, January 2011

Company Name: TCS.

Type: Fresher, Job Interview.

Hello Friends.

Selection procedure of TCS:

- Aptitude Test
- Technical Interview
- HR round

Aptitude Test:

No of question:35

Time: 80 mins

TCS uses touchstone for questions . Same type of question appear in every TCS paper

So solve previous Tcs papers

NOTE: ONLY THE PERSON WHO HAS SOLVED PREVIOUS TCS papers can crack the exam

otherwise there is no chance no matter how intelligent you are.

Paper:

1. (1/2) of a number is 3 more than the (1/6) of the same number?

- a) 6
- b) 7
- c) 8
- d) 9

2. A lady has fine gloves and hats in her closet- 13 blue, 27 red, and 40 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that it is a glove. How many gloves must she take out to make sure she has a pair of each color?

3. Middle earth is a fictional land inhabited by hobbits, elves, dwarves and men. The hobbits and elves are peaceful creatures that prefer slow, silent lives and appreciate nature and art. The dwarves and the men engage in physical games. The game is as follows. A tournament is one where out of the two teams that play a match, the one that loses get eliminated. The matches are played in different rounds, where in every round; half of the teams get eliminated from the tournament. If there are 8 rounds played in knock out tournament, how many matches were played?

- a) 257
- b) 256
- c) 72
- d) 255

4.10 people are there, they are shaking hands together, how many hand shakes possible, if they are in no pair of cyclic sequence.

- a) 45
- b) 9
- c) 12
- d) 10

5. On planet korba, a solar blast has melted the ice caps on its equator. 9 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of circle, and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4*v(t-9)$  for  $t = 9$  where  $d$  represents the diameter in mm and  $t$  the number of years since the solar blast. Jagan recorded the radius of some echina at a particular spot as 7mm. How many years back did the solar blast occur?

- a) 17
- b) 21.25
- c) 12.25
- d) 14.05

6. Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.

- a) 20.72
- b) 3.5
- c) 238.25
- d) 6.18

7. A sheet of paper has statements numbered from 1 to 70. For all values of  $n$  from 1 to 70. Statement  $n$  says ' At least  $n$  of the statements on this sheet are false. ' Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The odd numbered statements are true and the even numbered are false.
- c) The first 35 statements are true and the last 35 are false.
- d) The first 35 statements are false and the last 35 are true.

4-5 this type of questions appeared

at least  
almost  
exactly

8. If there are 30 cans out of them one is poisoned if a person tastes very little he will die within 14 hours so if there are mice to test and 24 hours to test, how many mices are required to find the poisoned can?

- a) 3

- b) 2
- c) 6
- d) 1

9. It is dark in my bedroom and I want to get two socks of the same color from my drawer, which contains 24 red and 24 blue socks. How many socks do I have to take from the drawer to get at least two socks of the same color?

- a) 2
- b) 3
- c) 48
- d) 25

10. In T. Nagar the buildings were numbered from 1 to 1000. Then how many 4's will be present in the numbers? in octal

11. By using 1, 2, 3, 4, 5, how many 5 digit no. can be formed which is divisible by 4, repetition of no. is allowed??

12. Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line, i.e. the point lies on one side of the line while the others lie on the other side.

13. The number of 1-sets of P is denoted by  $n_1(P)$ . The minimum value of  $n_1(P)$  over all configurations P of 5 points in the plane in general position (i.e. no three points in P lie on a line) is

- a) 3
- b) 5
- c) 2
- d) 1

14. The citizens of planet Nigiet are 8 fingered and have thus developed their decimal system in base 8. A certain street in Nigiet contains 1000 (in base 10) buildings numbered 1 to 1000. How many 3s are used in numbering these buildings?

- a) 54
- b) 64
- c) 265
- d) 192

Ans: 192

14. Some times base value is change like: 9 finger, 1 to 100 (base 9)

15. Here 10 programmers type 10 lines within 10 minutes then 60 lines can type within 60 minutes. How many programmers are needed?

- a) 16
- b) 6
- c) 10
- d) 60

Solution men\*time)/work)

Ans: 10

16. This type of Q's repeated 4times for me but values are different.

Alok and Bhanu play the following min-max game. Given the expression

$$N = 9 + X + Y - Z$$

Where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be

- a) 0
- b) 27
- c) 18
- d) 20

17. The Q's concept is same but the equation of N's is changing.

36 people {a<sub>1</sub>, a<sub>2</sub>, ..., a<sub>36</sub>} meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs, {a<sub>1</sub>, a<sub>2</sub>}, {a<sub>2</sub>, a<sub>3</sub>}, ..., {a<sub>35</sub>, a<sub>36</sub>}, {a<sub>36</sub>, a<sub>1</sub>}. Then size of the smallest set of people such that the rest have shaken hands with at least one person in the set is

- a) 12
- b) 11
- c) 13
- d) 18

Ans: 18

18. . After the typist writes 12 letters and addresses 12 envelopes, she inserts the letters randomly into the envelopes (1 letter per envelope). What is the probability that exactly 1 letter is inserted in an improper envelope?

- a) 1/12
- b) 0
- c) 12/212
- d) 11/12

19. A sheet of paper has statements numbered from 1 to 40. For each value of n from 1 to 40, statement n says "At least and of the statements on this sheet are true." Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The first 26 statements are false and the rest are true.
- c) The first 13 statements are true and the rest are false.
- d) The odd numbered statements are true and the even numbered are false.

Ans: c

20. There are two boxes, one containing 10 red balls and the other containing 10 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a

ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is

- a)1/2 b)14/19 c)37/38 d)3/4

Ans: 14/19

21. A circular dartboard of radius 1 foot is at a distance of 20 feet from you. You throw a dart at it and it

hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

- a) 0.75 b) 1 c) 0.5 d) 0.25

Ans: d

22. Alok and Bhanu play the following coins in a circle game. 99 coins are arranged in a circle with each coin touching two other coin. Two of the coins are special and the rest are ordinary. Alok starts and the players take turns removing an ordinary coin of their choice from the circle and bringing the other coins closer until they again form a (smaller) circle. The goal is to bring the special coins adjacent to each other and the first player to do so wins the game. Initially the special coins are separated by two ordinary coins O1 and O2. Which of the following is true?

- a) In order to win, Alok should remove O1 on his first turn.
- b) In order to win, Alok should remove one of the coins different from O1 and O2 on his first turn.
- c) In order to win, Alok should remove O2 on his first turn.
- d) Alok has no winning strategy

Exam/Interview Date: 10th, January 2011.

No of Rounds: Aptitude Test, Technical Round-1

Location: Delhi

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**Latest TCS Fresher Job Interview Paper Pattern 12, January 2011**  
(SET-2)

Company Name : TCS

Type : Fresher, Job Aptitude Test Paper

Hi Friends.

I have appeared for TCS on campus on 12th January at GNIT along with other 1300 students (JIS + Narula+ GNIT) .TCS had previously (in the month of December) given away their Demo paper to many colleges and we were no exception. We practiced them repeatedly. On the day of the aptitude test we found that each & every question in the aptitude was from those papers given previously by TCS. We were very happy, we answered around 28(correct) on an avg.

I personally answered 30(correct), could have answered >32 but didn't due to the fear of uppercut off. In general cases it remains (lower cutoff 18 & upper cutoff >32).But Eventually when results were out.

The lower cutoff was 33 out of 35.those who have any doubt can ask this to any student of jis/gnit/narula of batch 2011 pass out.

**SET : 2**

1. Here are 2 cans A and B one of MILK and other of Water resp., both of same quantity first one teaspoon of milk from a can was added to a can then which of the following is true.

- (a) Can A contain more milk than water in can B
- (b) Can A contain less milk than water in can B
- (c) Both contain same quantity of milk and water

2. If a pipe can fill the tank within 6 hours but due to leak it took 30 minutes more now if the tank was full how much time will it take to get emptied through the leak?

Ans-78hour

3. The average weight of class is X kg (some number) after adding wt of the teacher avg. wt. of class becomes Y kg then what is the weight of the teacher?

4. 20 men shake hand with each other. What is the maximum no of handshakes without cyclic handshakes?

Ans=20C2=190

5. 100 men & women dance with each other. What is the probability that a man cannot dance with more than two women?

6. A man goes North 37 km turns left goes 2 km turns right goes 17 km turns right goes 2 km, find the distance between starting & ending point .

Ans=54

7. Lady has 2 select gloves & hat from a basket in the dark. She can distinguish hat 7 gloves, 14 red, 20 blue, 18 green are there. Find the probability that any selected glove pair has same color.

8. Peter is 2 times Paul's age was when Peter's age is same as Paul's present age. Find the Paul's age.

9. From a rope a triangle is made of sides 21cm, 24cm, 28cm from this a square is made. Find the area of square.

Ans = $330 \text{ cm}^2$

10. In a supermarket average of 4 peoples standing in queue taken 2 yrs before is 55 yrs .Now a person of 45 yrs is added. Find the current age.

Ans=68.25 year

11. A toy can produce 10 different sounds. Now toy is defective to produce 2 sounds in 3 minutes, find the probability that it produces 6 consecutive in 1 second?

12. 1/6th of a number is 4 times more than 2/3 of a number. Find number.

13. A jogger jogs@1/6th of his usual speed. How much % she has to increase to reach normal pace of walking.

Ans = 500%

14. X is 3 years younger to Y, X's father is a businessman who invested 10000/- at 8% rate of interest and obtained his amount after 10 years .Y's father is a job holder who invested around 20000 at 2% rate and obtained his amount after 20 years . Now compounded both of them get around ABC rs/- . After 5 years the ratio of ages of X & Y is 1:2. Now X's father is 20 years older to Y and Y's father is 30 years more than X. After 20 years again X's mother asks X's father to purchase a LCD TV which costs around 45000/-. What is the age of X and Y together?

15. The bacteria had a probability of splitting into three and a probability to die is one third of total bacteria. Let the probability be P. Some of them survived with probability 1/5 than which among the following relation is true?

- (a)  $P=1/3+1/5*3$
- (b)  $P=1/5*(1/8-3)$

16. If a tank A can be filled within 10 hrs and tank B is 1/4th filled in 19 hrs, then what is the duration of the tank to fill completely?

17. A lady had fine gloves and hats, 25 blue, 7 red and 9 grey .She had to select a pair among them. But there was no light so she had to select in darkness the correct pair with glove and a hat. Therefore how many combinations of same color she can select?

18. A man looks at a painting and tells “Neither I have brothers nor sisters, but the person in the painting is my father’s son”. Then who is in the painting?

Ans=man

19. An old toy had three grandchildren, the difference between two children was 3 years. Her eldest grandchild was 3 times elder than the youngest one and the elder one 2 years more than the sum of the other two. Then what is the age of the eldest child?

20. There was a grandmother in a village that had a grandchild. Upon asking her grandchild's age she told that she is older as many days old as her daughter's age in weeks and as many days as her own age in years. The sum of the three is 130, then how old is the child?

21.  $(98*98*98-73*73*73)/ (98*98*98+73*73*73)= ?$

Ans=(1003 - 703)/(1003+ 703) =nearly 5

22. Which is the smallest number which on dividing 2880 to make it a perfect square?

- (a) 6
- (b) 5
- (c) 4
- (d) 3

Ans=2880

23. Leena cut small cubes of 10 cubic cms each, which she joined to form a cube with 10 cm

length, 5 cm in depth and 5 cm wide. How many more small cubes does she require to form a perfect cube?

Ans=  $(100 - 25) = 75$

24. The age of two people is in the ratio 6:8, the sum of their ages is 77 after 2 years the ratio of their ages becomes 5:7, what is their present age?

Ans=33&44

25. If a and b are mixed in 3:5 ratio and b,c are mixed in 8:5 ratio if the final mixture is 35 liters, find the amount of b in the final mixture.?

Ans = $40/89 *35$

26. A vendor sells 1 apple for 1 penny, 2 grapes for 1 penny, 3 bananas for 1 penny. A man spends 7 penny and gives equal amount of fruits to each of his three daughters. What is the possible number of fruits each daughter gets?

Ans=1:2:1

27. 5 persons standing in queue with different age group two years ago their average age will be X and 6th person joined with them; hence the current average age has become Y. Find the age of seventh person?

28. 5,9,12,18,26,36,47,72,.....? .Here odd terms have difference as multiples of 7 and even terms adds with themselves to form the next number.

Ans= $47+28=75$

29. Lion tells lies on Mondays, Tuesday and Wednesday, Rat tells lie on Thursday, Friday and Saturday, Both of them speak truth on other days. Lion tells, "Yesterday was one of the days which, I tell lying", Rat also tells "Yesterday was one of the days which I tell lying:.. What day was yesterday?

Ans=thursday

30. There were three different gloves 13 red, 27 black and 40 green. How many gloves one has to take so as to ensure that there is at least one pair in each color?

31. One person has no siblings and says." The guy in the photo is the only son of my father's son", what is the relation of the guy to the person?

Ans = man

32. Difference of two numbers is 6. Product of them is 13.what is the sum of their squares?

Ans=62

33. Speed and distance were given and time taken was asked.  $T=D/S$ .

34. A lady builds 9cm length, 10 cm width,3 cm height box using 3 cubic cm cubes. What is the minimum number of cubes required to build the box?

Ans = 90

35. When a pair of dice is thrown, what number has the higher probability to occur the sum of 8 or 9 or 10?

36. A person has to make 146 pieces of a long bar. He takes 4 seconds to cut a piece . What is the total time taken by him in seconds to make 146 pieces?

Ans=480 sec

37. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them, hence the current average age has become 45, find the age of seventh person?

Ans=71 year

38. Horse started to chase dog as it relieved stable two hrs ago. And horse started to ran with average speed 22km/hr, horse crossed 10m road and two small pounds with depth 3m, and it crossed two small streets with 200m length .

After traveling 6 hrs ,2hrs after sunset it got dog. Compute the speed of the dog?

39. 3,22,7,45,15,?,31

Ans=91

40.  $((4x+3y)+5x+9y))/(5x+5y)=?$  as  $(x/2y)=2$

41. If we subtract a number with y, we get 4 increase of number. Once it got divided by y itself .Find that number?

Ans-  $x-y=4+x$   $x/y=x$

42.  $(209*144)^2 +(209*209) + (209*144)+(144*144)=?$

43. By which number should we divide the number 2880 to make it perfect square?

44. 1/3 of some number is 5 more than 1/6th of that number . Find the number?

Ans=30

45. Difference of two numbers is 4 and their product is 13. Find the sum of squares of that number?

46. How many of 14 digit numbers we can make with 1,2,3,4,5 that are divisible by 4 . Repetitions allowed.

47. Rearrange the alphabets REGHFTYD, find the type of rearranged word belongs to:

- (a) Animal
- (b) Tree
- (c) Bird
- (d) Thing

48. There is a factory which is producing the bicycles and four wheelers . One day the total

production of wheels is 158. Find out the possible no. of bicycles produced

- (a) 6
- (b) 7
- (c) 8
- (d) 9

49. Four years hence the average of 6 members is 45 . Now a person is added and the average becomes 48. What is the age of added person?

50. A dog started two hours early before the horse started. The horse reached the dog after 6 hours with the speed of 16 km/hr, find the speed of the dog?

51. There are bacteria which have the probability of die  $1/3$  of its total number or it may triple . Found out the probability?

- (a)  $P=1/3 + (2/3 * p^3)$
- (b)  $P=2/3 + (2/3 * p^3)$
- (c)  $P=2/3 + (1/3 * p^3)$
- (d)  $P=2/3 + (2/3 * p^3)$

52. There are two tanks A, B.A will fill up 1ltr in one hour. B tank will fill up double in every hour (like 10, 20, 40, 80, 160.....) if the tank B is filled  $1/16$  in 13 hours how much time it will take to fill up totally.

53. In a hotel we can order two types of varieties, but we can make 6 more varieties in home. One can want the four varieties with two from hotel must. Find how many ways one can order.

54. There is a series 13,14,27,30,55,62 ?, 126. Find the missing.

55. There are three friends x,y,z . They go to excursion with their girl friends. There they wanted to find weights but their GF's are not accept to check their weight. Then they check weights as x,y,z individually and then x and y, y and z,x and z , then all(x,y,z) , the last measure is 171. Then find the average of all these seven measures.

56. Two tanks A and B ,A fills 1 ltr/1 hr....B fill 10,20,30,..... Per hour . If  $1/4$ th tank of B takes 15 hrs to fill how much it time will t take to fill complete tank.?

57. Out of 7 children the youngest is boy than find the probability that all the remaining children are boys?

58. The three sides of a triangle are given 16,14,21 cm and this triangle is converted into square. So what will be the area of the square generated?

59. An equation of the form  $4x+6y-2z =32$ . Find the difference between x intercept and z intercept.?

60. 20 men and 20 women are there, they dance with each other, is there possibility that 2 men

are dancing with same women and vice versa.

61.10 people are there, they are shaking hands together, how many handshakes possible, if they are in no pair of cyclic sequence.

62. In a school there are some bicycles and 4 wheeler wagons. One Tuesday there are 234 wheels in the campus. How many bicycles are there.?

63. A father has 7 paise's with him and 1 water melon is for 1p, 2 chickpeas for 1p, 3 grapes for 1p has three sons. How can he share the fruits equally.?

64. In one organization , materials , labor and maintenance are in the ratio of 4:6:7, if the material cost is 272, what is the total cost?

65. 4 years before Paul's age is 3 times the Alice age and the present age of Paul's is 6 times the Alice , what is the present age of Paul?

66. The ages of two people has the ratio of 6:5 and by adding the numbers we get 55 , after how many years the ratio would be 8:7?

67. A volume of X are having in a container of sphere , how many semi hemispheres of volume each will be required to transfer all the A into semi hemispheres?

68. Peter and Paul are two friends. The sum of their ages is 42 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the present age of Peter?

69. A horse chases a pony 2 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 81 kmph, what is the average speed of the pony?

70. A,B,C,D,E are there among A,B,C are boys and D, E are girls>>>>> D is to the left of A and no girl sits at the middle and at the extremes . Then what is the order of their sittings.

71. A man goes 50km NORTH , then turned left walked 40 km , then turned RIGHT? .In which direction is he in?

72. Out of 6 children the youngest is boy then find the probability that all the remaining children are boys.

73. A man went 1 mile to east then 1 mile to north and killed a bear what is the color of the bear?

74. In a market 4 men are standing , the average age of the four before n4 years is 45, after some days one man is added and his age is 49, what is the average weight of all?

75. One train travels 200m from A to B with 70 km/hr and returns to A with 80 kmph, what is the average of their speed?

76. The three sides of a triangle are given 18, 18, 28 cms and this triangle is converted into a square. So what will be the area of the square generated?

77. An equation of the form  $7x+17y+3z=54$ . Find the difference between x intercept and z intercept?

78. There are 1000 pillars for a temple 3 friends Linda, Chelsey, Juli visited that temple, Linda is taller than Chelsey and taller than 2 of 1000 pillars Juli is shorter than Linda. Find the correct sentence?

- (a) Linda is shorter among them
- (b) Chelsey is taller than Juli
- (c) Chelsey is shorter than Juli
- (d) Cannot determine who is taller among Chelsey and Juli.

79. Entry ticket to an exhibition ranges from 1p to 7p. You need to provide exact change at the counter . You have 7p coin . In how many parts will you divide 7p so that you will provide the exact change required and carry as less coins as possible?

- (a) 8
- (b) 7
- (c) 5
- (d) 3

80. Dhoni and Pointing are waiting for the toss to happen, Umpire found that the coin to be tossed is missing .pointing then takes a dice 91-6) from his pocket and asks the umpire to toss with it. Umpire feels both the captains may not get which then would give fair chance to both captains. What would be the idea of Dhoni?

81. 23 people are there, they are shaking hands together, how many hands shakes possible, if they are in pair of cyclic sequence.

82.10 men and 10 women are there, they dance with each other , is there possibility that 2 men are dancing with same women and vice versa.

83. A lady took out jacket and gloves , which are available in blue 26,yellow 30 and red 56.Power goes off, she can distinguish between gloves and jacket but not in colors. What's the possibility their she will pick up pair of gloves of each color?

84. Sangakara and Ponting selects batting by using a dice , but dice is biased so to resolve Ponting takes out a coin, what is the probability that dice shows correct option?

85. In school there are some bicycles and 4 wheeler wagons. One Tuesday there are 58 wheels in the campus. How many bicycles are there?

86. Two bowls are taken , one contains water and another contains tea. One spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl. Which statement will hold good for the above?

87. From 8 digit numbers from by using 1,2,3,4,5 with repetition is allowed and must be divisible by 4?

- (a) 31250
- (b) 97656
- (c) 78125
- (d) 97657

88.  $(a^3 - b^3) / (a^2 + ab + b^2)$

89. A lies on mon, tues, wed and speak truths on other days, B lies on thur,fri,sat and speaks truths on other days. One day a said I lied today and B said I too lied today. What is the day?

90.  $(1/2)$  of a number is 3 times more than the  $91/6$  of the same number?

91. There are two pipes A and B , if A filled 10 liters in hour B can fills 20 liters in same time. Likewise B can fill 10, 20, 40, 80,160....., if b filled in  $(1/16)$  the of a tank in 3 hours , how much time will it take to fill completely.?

92. One question has last part like difference between two terms is 9 and product of two numbers is 14, what is the squares of sum of numbers?

93. A man is standing before a painting of a man and he says I have no bro and sis and his father is my father's son?

94. What is the value of  $[(3x+8y)/(x-2y)]$ , if  $x/2y=2$ ?

95. One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

96. In a market 4 man are standing, the average age of the four before 4 years is 45,after some days one man is added and age is 49, what is the average age of all?

97. In a school for a student out of a 100 he got 74 of average for 7 subjects and he got 79 marks in 8th subject, what is the average of all the subjects?

98. The ages of two people has the ratio of 6:5 and by adding the numbers we get 44, after how many years the ratio would be 8:7?

99. Two years before Paul's age is 2 times the Alice age and the present age of Paul is 6 times the Alice. What is the presents Paul's age?

100. One train travels 200m from A to B with 70km/hr and returns to A with 80kmph, what is the average of their speed?

101. A man whose age is 45 years has 3 sons named John, Jill, Jack, he went to a park weekly twice , he loves his sons very much. On a certain day he find # shopkeepers sailing different things. An apple cost 1 penny,2 chocolates costs 1penny&3 bananas cost 1 penny, he has bought equal no of apples, chocolate & banana for each son. If the total amount he invest is 7 penny then how many he has bought from each piece for his son?

- (a) 1 app,1 cho,1 banana
- (b) 1 app,2cho,3 bananas
- (c) 1app,2cho,1 banana
- (d) 2app,2cho,2 bananas

102. A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he traveled 1 mile in north direction & reached at north pole, there he saw a bear, he then followed the bear around 1 hr with a speed of 2kmph in east direction , after that he traveled in south direction & reached at his lab min 2 hrs. Then what is the color of the bear?

- (a) white (b) black (c) gray (d) brown

103. How many 9 digit numbers are possible by using the digits 1,2,3,4,5, which are divisible by 4 if repetition of digits is allowed?

104. 3 persons a,b,c were there A always says truth , B lies on Monday, Tuesday & Wednesday, but C lies on Thursdays, Friday & Saturday, one Das A said that B & C said to A that B said yesterday way one of the days when I lies said that yesterday way one of the days when I lies too, then which day was that?

105. A girl has to make pizza with different toppings . There are 8 different toppings, in how many ways can she make pizzas with 2 different toppings.

106. Peter& Paul are two friends . The sum of their ages is 35 years . Peter is twice as old as Paul was when Peter was as old as Paul is now . What is the present age of Peter?

107. 2 pots are there , 1st pot is filled with ink and 2nd pot is filled with water, take 1 spoon of ink from 1st pot and pore it in 2nd pot and take 1 spoon of mixture from 2nd pot and pore it in 2nd then which one of following is true?

108. There are ten spots in library and each spot has 4 tables and ten readers are there, 10 students come into library and want 2 studies in how many ways that they sit in d library so that no chair would be blank?

109. There is a toy train that can make 10m musical sounds . It makes 2 musical sounds after being defective . What is the probability that same musical sound would be produced 5 times consecutively?( 1 of \_\_\_\_\_)?

110. There are 5 materials to make a perfume ,Lilac,Balsalmic,Lemon,Woody and Mimosaic, To make a perfume that is in demand the following conditions are to be followed :Lilac and Balsalmic go together,Woody and Mimisaic go together,woody and Balsalmic never go together.

Lemon can be added with any material. All of the following combinations are possible to make a perfume EXCEPT.

- (a) balsalmic and lilac
- (b) Woody and Lemon
- (c) Mimosaic and lilac
- (d) Mimosaic and Lilac

111. A triangle is made from a rope . The sides of the triangle are 25 cm, 11 cm, and 31 cm. What will be the area of the square made from the same rope?

112. What is the distance between the Z-intercept from the X-intercept in the equation  $ax+by+cz+d=0$ .

113. An athlete decides to run the same distance in  $\frac{1}{4}$  the less time that she usually took. By how much percent will she have to increase her average speed?

114. Two pipes A and B fill at A certain rate B is filled at 10,20,40,80, if  $\frac{1}{16}$  of B if filled in 17 hours what time it will take to get completely filled .

115. In a shopping mail with a staff of 5 members the average age is 45 years. After 5 years a person joined them and the average age is again 45 years . What's the age of the 6th person?

116. Find  $(4x+2y)/(4x-2y)$  if  $x/2y=2$ ?

117. Find the average speed if a man travels at speed of 24kmph up and 36kmph down at an altitude of 200 m. Formula is  $2xy/(x+y)$ .

118. Six friends go to pizza corner there are 2 types of pizzas and six different flavors are there they have to select 2 flavors from 6 flavors in how many ways we can select?

119. 3 friends A,B,C went for week end party to McDonald's restaurant and there they measure there weights in some order In 7 rounds.A:B:C,AB:BC,AC:ABC. Final round measure is 155 kg then find the average weight of all the 7 rounds?

120. There is a toy train that can make 10 musical sounds . It makes 2 musical sounds after being defective. What is the probability that same musical sound would be produced 5 times consecutively?(1 of )?

121. What is the distance of the z-intercept from the x-intercept in the equation  $ax+by+cz=d$  ( I do not remember the values of a,b,c,d)

122. A scientist in Antarctic region conducts research on bears came to know that bears changes according to the location . Once he moves 1 mile towards north, then he moves 2 miles towards east, then 1 mile towards south. Now the color of bear he found will be in:

123.  $\frac{91}{30}$  of a number is 3 times more than the  $\frac{1}{60}$  of the same number?

124. There are 11 Boys in a family . Youngest child is a boy . What is the probability of all are boys?

- (a) 2 (b) 2! (c) 2048 (d) 1024

125. A boy bought a roll A of 56 inches wide and 141 yards long. He also bought B of 77 inches wide of length 333 yards. Time taken for cutting A into 1 yard piece is 2 seconds. Time taken to cut into 141 pieces of 1 yard each is?

126. A person buys a horse for 15 ponds after one year he sells it for 20 pounds .After one year , again he buys the same horse at 30 pounds and sells it for 40 pounds. What is the profit for that person?

127. John buys a cycle for 31 dollars and given a cheque of amount 35 dollars. Shop keeper exchanged the cheque with his neighbor and gave change to John. After 2 days it is known that cheque is bounced. Shop keeper paid the amount to his neighbor. The cost price of cycle is 19 dollars. What is the profit/loss for shop keeper?

128. In a family there are some boys and girls. All boys told that they are having equal no of brothers and sisters and girls told that they are having twice the no. of brothers than sisters. How many boys and girls present in a family?

129. There are certain number of hats and gloves in box. They are of 41 red, 23 green, 11 orange. But a woman can differentiate between hats and gloves. How many draws are required to obtain a pair of each color?

130. 2 years ago of A is x times that of B. 3years hence the age of A is  $\frac{4}{3}$  times of B. What is the present age of B in binary form?

131. A metal strip of width x cm, 2 metal strips are placed one over the other, then the combine length of 2 strips is y , if z strips are placed in that number manner. What is the final width of that arrangement?

132. There are 100 men and 100 women on the dance floor. They want to dance with each other. Then which of the following statements is always true:

- (a) There are 2 men who danced with equal no. of women's  
(b) There are 2 women who danced with equal no of men

133. A game is played between 2 players and one player is declared as winner. All the winners from first round are played in second round. All the winners from second round are played in third round and so on. If 8 rounds are played to declare only one player as winner, how many players are played in first round.

134. There are 3 boys A,B,C and 2 girls D,E,.D always sit right to A, Girls never sit in extreme positions and in the middle position always sits in the extreme positions. Who is sitting immediate right to E?

135. 49 members attended the party, in that 22 are males, 17 are females. The shake hands between males, females, male and female. Total 12 people given shake hands. How many such

kinds of such shake hands are possible?

136. Entry ticket to an exhibition ranges from 1p to 31p. You need to provide exact change at the counter. You have 31p coin. In how many parts will you divide 31p so that you will provide that exact change required and carry as less coins as possible?

(a) 22 (b) 31 (c) 6 (d) 32

137. There are 2 friends Peter and Paul, Peter age is twice as old as Paul when Peter was as old as Paul is now. Sum of the present ages of Peter and Paul is 35. What is the present age of Peter?

138. A lady took out jacket and gloves, which are available in blue 26, yellow 30 and red 56. Power goes off, she can distinguish between gloves and jacket but not in color. What's the possibility their she will pick up pair of gloves of each color.

139. Two bowls are taken, one contains water and another contains tea. One spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl.

Which statement will hold good for the above

140. One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

141. 10 men and 10 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa.

142. Two bowls are taken, one contains water and another contains tea. One spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl. Which statement will hold good for the above.

143. From 8 digit number from by using 1,2,3,4,5 with repetition is allowed and must be divisible by 4?

(a) 31250 (b) 97656 (c) 78125 (d) 97657

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147. In a school for a student out of a 100 he got 74 of average for 7 subjects and he got 79 marks in 8th subject. What is the average of all the subjects?

149. One train travels 200 m from A to B with 70 km/ph and returns to A with 80 km/ph, what is the average of their speed?

150. There are 10 reading spots in a room. Each reading spot has a round table .Each round table has 4 chair; if different no of persons are sitting at each reading spot. And if there are 10 persons inside the room then how many reading spots do not have at least a single reader.

(a) 5 (b) 6 (c) 7 (d) None

151. A person does rock climbing at an altitude of 800 m. He goes up by 7mph and come down by 9 mph.What was his average speed.

152. A boy want to make a cuboid of dimension 5m,6m,7m from small cubes of .03 m<sup>3</sup>.later he realized ,he can make same cuboid by making it hollow. Then it take some cubes less. What is the no of these cube.

153. Two years ago A was 6 times older than B . Now he is 2 times older than B. What is the age of A.

154. What is the value of  $(78*78*78*-45*45*45)/(78*78+78*45+45*45)$

155. In a shopping mall with a staff of 5 members the average age is 45 years. After 5 years a person joined them and the average age is again 45 years . What is the age of 6th person?

156. Find  $(4x+2y)/(4x-2y)$  if  $x/2y=2$

157.Find the average speed if a man travels at speed of 24kmph up and 36 kmph down at an altitude of 200m, formula is  $2xy/(x+y)$

158. A triangle is made from a rope .The sides of the triangle are A cm,B cm& C cm. What will be the area of the square made from the same rope?

159. What is the distance of the z-intercept from the x-intercept in the equation  $ax+by+cz=d$  ( I do not remember the values of a,b,c,d)

160. A scientist in Antarctic region conducts research on bears came to know that bears changes according to the location. Once he moves 1 mile towards north, then he moves 2 miles towards east, then 1 mile towards south . Now the color of bear he found will be in.

161.  $(1/3)$  of a number is 3 times more than the  $(1/6)$  of the same number?

162. There are 11 boys in a family .Youngest child is a boy . What is the probability of all are boys.

(a) 2 (b) 2! (c) 2048 (d) 1024

163. A boy bought a roll A of 56 inches wide and 141 yards long. He also bought B of 77 inches

wide of length 333 yards. We don't want any details of B. Final question is time taken for cutting A into 1 yard piece is 2 seconds. Time taken to cut into 141 piece of 1 yard each is?

164. A person buys a horse for 15 ponds, after one year he sells it for 20 ponds, after one year, again he buys the same horse at 30 ponds and sells for 40 ponds. What is the profit for that person?

165. John buys a cycle for 31 dollars and given a cheque of amount 35 dollars. Shop Keeper exchanged the cheque with his neighbor and gave change to john. After 2 days, it is known that cheque is bounded .Shop Keeper paid the amount to his neighbor. The cost price of cycles is 19 dollars. What is the profit/loss for shopkeeper?

166. There is a die with 10 faces .It is not known that fair or not 2 captains want to toss die for batting selection. What is the possible solution among the following?

- (a) if no. is odd it is head, if no is even it is tails
- (b) if no is odd it is tail, if no is even it is head
- (c) Toss a die until all the 10 digits appear on top face.

167. In a family there are some boys and gilrs. All boys told that they are having equal no of brothers and sisters and girls told that they are having twice the no of brothers than sisters. How many boys and girls present in a family?

168. 2 years ago of A is x times that of B. 3 years hence the age of A is  $\frac{4}{3}$  times of B. What is the present age of B in binary form?

169. A metal strip of width x cm, 2 metal strips are placed one over the other, then the combine length of 2 strips is y , if z strips are placed in that number manner. What is the final width of that arrangement?

170. There are 100 men and 100 women on the dance floor. They want to dance with each other. Then which of the following statements is always true:

- (a) There are 2 men who danced with equal no. of women's
- (b) There are 2 women who danced with equal no of men

171. A game is played between 2 players and one player is declared as winner. All the winners from first round are played in second round. All the winners from second round are played in third round and so on. If 8 rounds are played to declare only one player as winner, how many players are played in first round.

172. There are 3 boys A,B,C and 2 girls D,E.,D always sit right to A, Girls never sit in extreme positions and in the middle position always sits in the extreme positions. Who is sitting immediate right to E?

173. 49 members attended the party, in that 22 are males, 17 are females. The shake hands between males, females, male and female. Total 12 people given shake hands. How many such kinds of such shake hands are possible?

174. There are 1000 pillars for a temple 3 friends Linda, Chelsey, Juli visited that temple, Linda is taller than Chelsey and taller than 2 of 1000 pillars Juli is shorter than Linda. Find the correct sentence?

- (a) Linda is shorter among them
- (b) Chelsey is taller than Juli
- (c) Chelsey is shorter than Juli
- (d) Cannot determine who is taller among Chelsey and Juli.

175. Entry ticket to an exhibition ranges from 1p to 31p. You need to provide exact change at the counter. You have 31p coin. In how many parts will you divide 31p so that you will provide that exact change required and carry as less coins as possible?

- (a) 22
- (b) 31
- (c) 6
- (d) 32

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**Latest TCS Fresher Job Interview Paper Pattern 12, January 2011**  
[\(SET-3\)](#)

Company Name : TCS

Type : Fresher, Job Aptitude Test Paper

Hi Friends.

I have appeared for TCS on campus on 12th January at GNIT along with other 1300 students (JIS + Narula+ GNIT) .TCS had previously (in the month of December) given away their Demo paper to many colleges and we were no exception. We practiced them repeatedly. On the day of the aptitude test we found that each & every question in the aptitude was from those papers given previously by TCS. We were very happy, we answered around 28(correct) on an avg.

I personally answered 30(correct), could have answered >32 but didn't due to the fear of uppercut off. In general cases it remains (lower cutoff 18 & upper cutoff >32).But Eventually when results were out.

**SET : 3**

1. Alok and Bhanu play the following min-max game. Given the expression  $N=40+X+Y-Z$ , where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be

- (a) 49
- (b) 51
- (c) 31
- (d) 58

2. The IT giant Tiroop has recently crossed a head count of 150000 and earnings of \$7 billion.

As one of the forerunners in the technology front, Tirnop continues to lead the way in products and services in India. At Tirnop, all programmers are equal in every respect. They receive identical salaries and also write code at the same rate. Suppose 14 such programmers take 14 minutes to write 14 lines of code in total. How long will it take 5 programmers to write 5 lines of code in total ?

- (a) 19
- (b) 5
- (c) 14
- (d) 70

3. 14 people meet and shake hands. The maximum number of handshakes possible if there is to be no ‘cycle’ of handshakes is (A cycle of handshakes is a sequence of people  $a_1, a_2, \dots, a_k$ ,  $k > 2$  such that the pairs  $\{a_1, a_2\}, \{a_2, a_3\}, \dots, \{a_{(k-1)}, a_k\}, \{a_k, a_1\}$  shake hands).

- (a) 11
- (b) 12
- (c) 10
- (d) 13

4. 45 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true? A. All the suspects are lying. B. The leftmost suspect is guilty. C. The rightmost suspect is guilty.

- (a) A only
- (b) A and C
- (c) B only
- (d) A and B

5. The dynamics of crowd behaviour are hard to study because usually people are not reliable witnesses of their own behaviour. Now consider 4 people standing in the queue of a supermarket. You want to predict their behaviour based on their age group. You get to know from the supermarket records that their average age 4 years ago was 43 years. After a while, another person joins the queue and the present average of all the 5 is 40 years. The present age of the last person in the queue is :

- (a) 28 years
- (b) 12 years
- (c) 32 years
- (d) 24 years

6. One day Snow-white meets Pal and Unicorn in the Fairyland. She knows the Pal lies on Mondays, Tuesdays and Wednesdays, and tells the truth on the other days of the week. Unicorn, on the other hand, lies on Thursdays, Fridays and Saturdays, but tells the truth on the other days of the week. Now they make the following statements to Snow-white – Pal: Yesterday was one of those days when I lie. Unicorn: Yesterday was one of those days when I lie too. What day is it?

- (a) Tuesday
- (b) Monday

- (c) Thursday
- (d) Sunday

7. The Barnes Foundation in Philadelphia has one of the most extra-ordinary and idiosyncratic collections in French impressionist art. Dr. Barnes who put together this collection has insisted that the paintings be hung in a particular manner specified by him at a museum designed by the French architect Paul Philippe Cret who also designed the Rodin Museum. The museum has, say, seven galleries – Eugene Boudin, Cassatt, Boudin, Forain, Gonzales, Manet and Monet. Visitors reach the main Eugene Boudin by an elevator, and they can enter and leave the exhibition only through Eugene Boudin gallery. Once inside, visitors are free to move as they choose. The following list includes all of the doorways that connect the seven galleries: There is a doorway between Eugene Boudin and Cassatt, a doorway between Eugene Boudin and Boudin, and a doorway between Eugene Boudin and Gonzales galleries. There is a doorway between Cassatt and Boudin galleries. There is a doorway between Gonzales and Forain and a doorway between Gonzales and Manet galleries. There is a doorway between Manet and Monet galleries. Which of the following rooms CANNOT be the third gallery that any visitor enters ?

- (a) Monet
- (b) Boudin
- (c) Forain
- (d) Cassatt

8. Mr. Beans visited a magic shop and bought some magical marbles of different colours along with other magical items. While returning home whenever he saw a coloured light, he took out marbles of similar colours and counted them. So he counted the pink coloured marbles and found that he has bought 25 of them. Then he counted 14 green marbles and then 21 yellow marbles. He later counted 30 purple coloured marbles with him. But when he reached a crossing, he looked at a red light and started counting red marbles and found that he had bought 23 Red marbles. As soon as he finished counting, it started raining heavily and by the time he reached home he was drenched. After reaching home he found that the red, green and yellow marbles had magically changed colours and became white, while other marbles were unchanged. It will take 1 day to regain its colours, but he needs to give atleast one pair of marbles to his wife now. So how many white marbles must be choose and give to his wife so as to ensure that there is atleast one pair of red, yellow and green marbles ?

- (a) 46
- (b) 35
- (c) 29
- (d) 48

9. A greengrocer was selling watermelon at a penny each, chickoos at 2 for a penny and peanuts at 3 for a penny. A father spent 7p and got the same amount of each type of fruit for each of his three children, Jane, Joe and Jill. Jane is three years older than Jill and Joe is exactly half the age of Jane and Jill together. What did each child get ?

- (a) 1 watermelon, 3 chickoos, 2 peanuts
- (b) 1 watermelon, 1 chickoo, 1 peanut
- (c) 1 watermelon, 2 chickoos, 2 peanuts
- (d) 1 watermelon, 2 chickoos, 1 peanut

10. Given 3 lines in the plane such that the points of intersection from a triangle with sides of length 20, 20 and 20, the number of points equidistant from all the 3 lines is

- (a) 4
- (b) 3
- (c) 0
- (d) 1

11. 33 people  $\{a_1, a_2, \dots, a_{33}\}$  meet and shake hands in a circular fashion. In other words, there are totally 33 handshakes involving the pairs,  $\{a_1, a_2\}, \{a_2, a_3\}, \dots, \{a_{32}, a_{33}\}, \{a_{33}, a_1\}$ . Then the size of the smallest set of people such that the rest have shaken hands with at least one person in the set is

- (a) 10
- (b) 11
- (c) 16
- (d) 12

12. Consider two vessels, the first containing one liter of water and the second containing one liter of pepsi. Suppose you take one glass of water out of the first vessel and pour it into the second vessel. After mixing you take one glass of the mixture from the second vessel and pour it back into the first vessel. Which one of the following statements holds now?

- (a) None of the statements holds true.
- (b) There is less Pepsi in the first vessel than water in the second vessel.
- (c) There is more Pepsi in the first vessel than water in the second vessel.
- (d) There is as much Pepsi in the first vessel as there is water in the second vessel.

13. Amok is attending a workshop ‘How to do more with less’ and today’s theme is Working with fewer digits. The speakers discuss how a lot of miraculous mathematics can be achieved if mankind (as well as womankind) had only worked with fewer digits. The problem posed at the end of the workshop is ‘How many 10 digit numbers can be formed using the digits 1, 2, 3, 4, 5 (but with repetition) that are divisible by 4?’ Can you help Amok find the answer?

- (a) 1953125
- (b) 781250
- (c) 2441407
- (d) 2441406

14. For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A’s chances of winning. Let’s assume such rumors to be true and that in a match between Ghana and Bolivia, Ghana the stronger team has a probability of  $11/12$  of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?

- (a) .92
- (b) .01
- (c) .85
- (d) .15

15. There are two boxes, one containing 39 red balls and the other containing 26 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is

- (a) .60
- (b) .50
- (c) .80
- (d) .30

16. After the typist writes 40 letters and addresses 40 envelopes, she inserts the letters randomly into the envelopes (1 letter per envelope). What is the probability that exactly 1 letter is inserted in an improver envelope?

- (a)  $1 - 1/40$
- (b)  $1/40$
- (c)  $1/401$
- (d) 0

17. A hare and a tortoise have a race along a circle of 100 yards diameter. The tortoise goes in one direction and the hare in the other. The hare starts after the tortoise has covered  $1/3$  of its distance and that too leisurely. The hare and tortoise meet when the hare has covered only  $1/4$  of the distance. By what factor should be hare increase its speed so as the win the race?

- (a) 4
- (b) 3
- (c) 12
- (d) 5.00

18. A sheet of paper has statements numbered from 1 to 20. For each value of  $n$  from 1 to 20, statements  $n$  says 'At least  $n$  of the statements on this sheet are true.' Which statements are true and which are false?

- (a) The odd numbered statements are true and the even numbered are false.
- (b) The first 13 statements are false and the rest are true.
- (c) The first 6 statements are true and the rest are false.
- (d) The even numbered statements are true and the odd numbered are false.

19. The question is followed by two statements, A and B. Answer the question using the following instructions: Choose 1: if the question can be answered by using one of the statements alone but not by using the other statement alone. Choose 2: if the question can be answered by using either of the statements alone. Choose 3: if the question can be answered by using both statements together but not by either statement alone. Choose 4: if the question cannot be answered on the basis of the two statements. Zaheer spends 30% of his income on his children's education, 20% on recreation and 10 % on healthcare. The corresponding percentages for Sandeep are 40%, 25% and 13%. Who spends more on children's education? A" Zaheer spends more on recreation than Sandeep B: Sandeep spends more on healthcare than Zaheer.

- (a) 3
- (b) 2
- (c) 1
- (d) 4

20. Subha Patel is an olfactory scientist working for International Flavors and Fragrances. She specializes in finding new scents recorded and reconstituted from nature thanks to Living Flower Technology. She has extracted fragrance ingredients from different flowering plants into bottles labeled herbal, sweet, honey, anisic and rose. She has learned that a formula for a perfume is acceptable if and only if it does not violate any of the rules listed: If the perfume contains herbal, it must also contain honey and there must be twice as much honey as herbal. If the perfume contains sweet, it must also contain anisic, and the amount of anisic must equal the amount of sweet. honey cannot be used in combination with anisic. anisic cannot be used in combination with rose. If the perfume contains rose, the amount of rose must be greater than the total amount of the other essence or essences used. Which of the following could be added to an unacceptable perfume consisting of two parts honey and one part rose to make it acceptable?

- (a) Two parts rose
- (b) One part herbal
- (c) Two parts honey
- (d) One part sweet

21. The citizens of planet Oz are 6 fingered and thus have developed a number system in base 6. A certain street in Oz contains 1000 buildings numbered from 1 to 1000. How many 3's are used in numbering these buildings? Express your answer in base 10.

- (a) 144
- (b) 54
- (c) 108
- (d) 36

22. Recent reports have suggested that sportsmen with decreased metabolic rates perform better in certain sports. After reading one such report, Jordan, a sportsperson from Arlington decides to undergo a rigorous physical training program for 3 months, where he performs Yoga for 3 hours, walks for 2 hours and swims for 1 hour each day. He says: I began my training on a Wednesday in a prime number month of 2008. I lost 1% of my original weight within the first 30 days. In the next two months combined, I lost 1 Kg. If he walks at 5 mph over a certain journey and walks back over the same route at 7 mph at an altitude of 200 meters, what is his average speed for the journey?

- (a) 5.83
- (b) 2.92
- (c) 6.00
- (d) 35.00

23. A schoolyard contains only bicycles and 4 wheeled wagons. On Tuesday, the total number of wheels in the schoolyard was 134. What could be possible number of bicycles?

- (a) 16
- (b) 15
- (c) 18
- (d) 14

24. A sheet of paper has statements numbered from 1 to 20. For all values of n from 1 to 20, statement n says: 'Exactly n of the statements on this sheet are false.' Which statements are true

and which are false?

- (a) The even numbered statements are true and the odd numbered statements are false.
- (b) All the statements are false.
- (c) The odd numbered statements are true and the even numbered statements are false.
- (d) The second last statement is true and the rest are false.

25. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of one litre every hour in A, it gets filled up like 10, 20, 40, 80, 160 in tank B. (At the end of first hour, B has 10 litres, second hour it has 20, and so on). If tank B is  $\frac{1}{8}$  filled after 5 hours, what is the total duration required to fill it completely?

- (a) 9 hours
- (b) 7 hours
- (c) 3 hours
- (d) 8 hours

26. A hollow cube of size 5 cm is taken, with a thickness of 1 cm. It is made of smaller cubes of size 1 cm. If 4 faces of the outer surface of the cube are painted, totally how many faces of the smaller cubes remain unpainted?

- (a) 900
- (b) 488
- (c) 500
- (d) 800

27. Alice and Bob play the following coins-on-a-stack game. 100 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack. Alice starts and the players take turns. A turn consists of moving the coin on the top to a position I below the top coin (for some I between 0 and 100). We will call this an i-move (thus a 0-move implies doing nothing). The proviso is that an i-move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coin is the third coin from the top. Then

- (a) In order to win, Alice's first move should be a 1-move.
- (b) In order to win, Alice's first move should be a 0-move.
- (c) Alice has no winning strategy.
- (d) In order to win, Alice's first move can be a 0-move or a 1-move.

28. The teacher is testing a student's proficiency in arithmetic and poses the following question:  
 $\frac{1}{2}$  of a number is 3 more than  $\frac{1}{6}$  of the same number. What is the number?

Can you help the student find the answer?

- (a) 9
- (b) 8
- (c) 10
- (d) 3

29. A circular dashboard of radius 1.0 foot is at a distance of 20 feet from you. You throw a dart

at it and it hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

- (a) 1.00
- (b) .75
- (c) .25
- (d) .50

30. A result of global warming is that the ice of some glaciers is melting. 13 years after the ice disappears, tiny plants, called lichens, start to grow on the rocks. Each lichen grows approximately in the shape of a circle. The relationship between the diameter of this circle and the age of the lichen can be approximated with the formula:  $d=10*(t - 13)$  for  $t > 13$ , where d represents the diameter of the lichen in millimeters, and t represents the number of years after the ice has disappeared. Using the above formula, calculate the diameter of the lichen, 45 years after the ice has disappeared.

- (a) 450
- (b) 437
- (c) 13
- (d) 320

31. 25 people meet and shake hands. The maximum number of handshakes possible if there is to be no ‘cycle’ of handshakes is (A cycle of handshakes is a sequence of people  $a_1, a_2, \dots, a_k, k \geq 2$  such that pairs  $\{a_1, a_2\}, \{a_2, a_3\}, \dots, \{a_{(k-1)}, a_k\}, \{a_1, a_1\}$  shake hands).

- (a) 24
- (b) 22
- (c) 21
- (d) 23

32. Consider two cans, the first containing one litre of water and the second containing one litre of Pepsi. Suppose you take one cup of water out of the first can and pour it into the second can. After mixing you take one cup of the mixture from the second can and pour it back into the first can. Which one of the following statements holds now?

- (a) There is less Pepsi in the first can than water in the second can.
- (b) There is more Pepsi in the first can than water in the second can.
- (c) None of the statements holds true.
- (d) There is as much Pepsi in the first can as there is water in the second can.

33. A greengrocer was selling orange at a penny each, olives at 2 for a penny and grapes at 3 for a penny. A father spent 7p and got the same amount of each type of fruit for each of his three children, Jane, Joe, and Jill. Jane is three years older than Jill and Joe is exactly half the age of Jane and Jill together. What did each child get?

- (a) 1 orange, 2 olives, 2 grapes
- (b) 1 orange, 3 olives, 2 grapes
- (c) 1 orange, 1 olive, 1 grape
- (d) 1 orange, 2 olives, 1 grape

34. A sheet of paper has statements numbered from 1 to 20. For each value of n from 1 to 20,

statement n says ‘At least n of the statements on this sheet are true.’ Which statements are true and which are false?

- (a) The even numbered statements are true and the odd numbered are false
- (b) The first 13 statements are false and the rest are true.
- (c) The first 6 statements are true and the rest are false.
- (d) The odd numbered statements are true and the even numbered are false.

35. 45 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true? A. All the suspects are lying. B. The leftmost suspect is guilty. C. The rightmost suspect is guilty.

- (a) A and C
- (b) A and B
- (c) A only
- (d) B only

36. Ferrari S.P.A. is an Italian sports car manufacturer based in Maranello , Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored driver and manufactured race cars before moving into production of street – legal vehicles in 1947 as Ferrari S.p.A.

Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One, where it has enjoyed great success. Rohit once brought a Ferrari. It could go 2 times as fast as Mohit’s old Mercedes. If the speed of Mohit’s Mercedes is 40 Km/hr and the distance traveled by the Ferrari is 913 Km, find the total time taken for Rohit to drive the distance.

- (a) 12 Hours
- (b) 22 Hours
- (c) 456 Hours
- (d) 11.41 Hours

37. The teacher is testing a student’s proficiency in arithmetic and poses the following question:  
1/3 of a number is 6 more than 1/6 of the same number. What is the number?

Can you help the student find the answer?

- (a) 35
- (b) 6
- (c) 37
- (d) 36

38. Recent reports have suggested that sportsmen with decreased metabolic rates perform better in certain sports. After reading one such report, Jordon, a sportsperson from Arlington decides to undergo a rigorous physical training program for 3 months, where he performs Yoga for 3 hours, walks for 2 hours and swims for 1 hour each day. He says: I began my training on a Wednesday in a prime number month of 2008. I lost 1% of my original weight within the first 30 days. In the next two months combined, I lost 1 Kg. If he walks at 5 mph over a certain journey and walks back the same route at 8 mph at an altitude of 200 meters, what is his average speed for the journey?

- (a) 6.15
- (b) 3.08
- (c) 6.50
- (d) 26.67

39. The result of global warming is the ice of some glaciers is melting. 19 years after the ice disappears, tiny planets, called lichens, start to grow on the rock. Each lichen grows approximately in the shape of a circle. The relationship between the diameter of the circle and the age of the lichen can be approximated with the formula:  $d = 12 * (t - 19)$  for  $t > 19$ , where  $d$  represents the diameter of the lichen in millimeters, and  $t$  represents the number of years after the ice has disappeared. Using the above formula, calculate the diameter of the lichen, 32 years after the ice has disappeared.

- (a) 384
- (b) 156
- (c) 19
- (d) 365

40. There are two boxes, one contains 12 red balls and the other containing 47 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is:

- (a) .59
- (b) .20
- (c) .10
- (d) .50

41. The citizens of planet Oz are fingered and thus have developed a number system in base 6. A certain street in Oz contains 1000 buildings numbered from 1 to 1000. How many 2's are used in numbering these buildings? Express your answer in base 10.

- (a) 144
- (b) 24
- (c) 108
- (d) 36

42. The question is followed by two statements, A and B. Answer the question using the following instructions: Choose1: if the question can be answered by using one of the statements alone but not by using the other statement alone. Choose2: if the question can be answered by using either of the statements alone. Choose3: if the question can be answered by using both statements together but not by either statement alone. Choose4: if the question cannot be answered on the basis of the two statements. Zayed spends 30% of his income on his children's education, 20% on recreation and 10% on healthcare. The corresponding percentage for Sandeep are 40%, 25% and 13%. Who spends more on children's education? A: Zayed spends more on recreation than Sandeep B: Sandeep spends more on healthcare than Zayed.

- (a) 4
- (b) 3
- (c) 2

(d) 1

43. The question is followed by two statements, A and B. Answer the question using the following instructions: Choose1: if the question can be answered by using one of the statements alone but not by using the other statement alone. Choose2: if the question can be answered by using either of the statements alone. Choose3: if the question can be answered by using both statements together but not by either statement alone. Choose4: if the question cannot be answered on the basis of two statements. Tarun is standing 2 steps to the left of a green mark and 3 steps to the right of a black mark. He tosses a coin. If it comes up heads, he moves one step to the right, otherwise he moves one step to the left. He keeps doing this until he reaches one of the two marks, and then he stops. At which mark does he stops? A: he stops at 21 coin tosses. B: he obtains three more tails than heads.

- (a) 1
- (b) 3
- (c) 4
- (d) 2

44. There are two water tank A and B, A is much smaller than B. While water fills at rate of one liter every hour in A, it gets filled up like 10, 20, 40, 80, 16..in tank B. (At the end of first hour, B has 10 litres, second hour it has 20, and so on). If tank B is  $\frac{1}{8}$  filled after 7 hours, what is the total duration required to fill it completely?

- (a) 10 hours
- (b) 9 hours
- (c) 11 hours
- (d) 3 hours

45. A sheet of paper has statements numbered from 1 to 10. For all values of n from 1 to 10, statement n says: ‘Exactly n of the statements on this sheet are false.’ Which statements are true and which are false?

- (a) The even numbered statements are true and the odd numbered statements are false.
- (b) The second last statement is true and the rest are false.
- (c) The odd numbered statements are true and the even numbered statements are false.
- (d) All the statements are false.

46. Alok is attending a workshop ‘How to do more with less’ and today’s theme is working with fewer digits. The speakers discuss how a lot of miraculous mathematics can be achieved if mankind (as we as womankind) had only worked with fewer digits. The problem posed at the end of the workshop is ‘How many 6 digit numbers can be formed using the digits 1,2,3,4,5, (but with repetition) that are divisible by 4?’ Can you help Alok find the answer?

- (a) 3906
- (b) 3907
- (c) 3125
- (d) 1250

47. The dynamics of crowd behavior are hard to study because usually people are not reliable witness of their own behaviour. Now consider 4 people standing in the queue of a supermarket. You want to predict their behaviour based on their age group. You get to know fro the

supermarket records that their average age 3 years ago was 48 years. After a while, another person joins the queue and the present average of all the 5 is 46 years. The present age of the last person in the queue is:

- (a) 38 years
- (b) 35 years
- (c) 41 years
- (d) 26 years

48. Alice and Bob play the following coins-on-a-stack game. 100 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top of the repeatedly moving the topmost coin to another position in the stack. Alice starts and the players take turns. A turn consists of moving the coin on the top to a position  $I$  below the top coin (for some  $I$  between 0 and 100). We will call this as  $i$ -move (thus a 0-move implies doing nothing). The proviso is that an  $i$ -move cannot be repeated, for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happen to be on the top when it's a player's turn then the player wins the game.

Initially, the gold coin is the third coin from the top. Then

- (a) In order to win, Alice's first move should be a 1-move.
- (b) Alice has no winning strategy.
- (c) In order to win, Alice's first move can be a 0-move or a 1-move.
- (d) In order to win, Alice's first move should be a 0-move.

49. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of one litre every hour in A, it gets filled up like 10, 20, 40, 80, 160 in tank B. (At the end of first hour, B has 10 litres, second hour it has 20, and so on). If tank B is  $1/16$  filled after 16 hours, what is total duration required to fill it completely?

- (a) 19 hours
- (b) 20 hours
- (c) 4 hours
- (d) 21 hours

50. Consider two tumblers, the first containing one litre of milk ad the second containing one litre of coffee. Suppose you take one glass of milt out of the first tumbler and pour it into the second tumbler. After mixing you take one glass of the mixture from the second tumbler and pour it back into the first tumbler. Which one of the following statements holds now?

- (a) None of the statements holds true.
- (b) There is less coffee in the first tumbler than milk in the second tumbler.
- (c) There is as much coffee in the first tumbler as there is milk in the second tumbler.
- (d) There is more coffee in the first tumbler than milk in the second tumbler.

51. A circular dashboard of radius 2.0 foot is at a distance of 20 feet from you. You throw a dart at it and it hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

- (a) .75
- (b) 1.00
- (c) .25

(d) .50

52. A sheet of paper has statements numbered from 1 to 10. For all values of n from 1 to 10, statement n says: 'Exactly n of the statements on this sheet are false.' Which statements are true and which are false?

- (a) All the statements are false.
- (b) The second last statement is true and the rest are false.
- (c) The even numbered statements are true and the odd numbered statements are false.
- (d) The odd numbered statements are true and the even numbered statements are false.

53. Consider two vessels, the first containing one litre of oil and the second containing one litre of coffee. Suppose you take one spoon of oil out of the first vessel and pour it into the second vessel. After mixing you take one spoon of mixture from the second vessel and pour it back into the first vessel. Which one of the following statements holds now?

- (a) None of the statements holds true.
- (b) There is less coffee in the first vessel than oil in the second vessel.
- (c) There is more coffee in the first vessel than oil in the second vessel.
- (d) There is as much coffee in the first vessel as there is oil in the second vessel.

54. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of one litre every hour in A, it gets filled up like 10, 20, 40, 80, 160 in tank B. (At the end of first hour, B has 10 litres, second hour it has 20, and so on). If tank B is  $\frac{1}{32}$  filled after 19 hours, what is total duration required to fill it completely?

- (a) 5 hours
- (b) 23 hours
- (c) 24 hours
- (d) 25 hours

55. The question is followed by two statements, A and B. Answer the question using the following instructions: Choose1: if the question can be answered by using one of the statements alone but not by using the other statement alone. Choose2: if the question can be answered by using either of the statements alone. Choose3: if the question can be answered by using both statements together but not by either statement alone. Choose4: if the question cannot be answered on the basis of two statements. Zayed spends 30% of his income on his children's education, 20% on recreation and 10% on healthcare. The corresponding percentage for Sandeep are 40%, 25% and 13%. Who spends more on children's education? A: Zayed spends more on recreation than Sandeep B: Sandeep spends more on healthcare than Zayed.

- (a) 1
- (b) 3
- (c) 4
- (d) 2

56. The question is followed by two statements, A and B. Answer the question using the following instructions: Choose1: if the question can be answered by using one of the statements alone but not by using the other statement alone. Choose2: if the question can be answered by using either of the statements alone. Choose3: if the question can be answered by using both

statements together but not by either statement alone. Choose4: if the question cannot be answered on the basis of two statements. Tarak is standing 2 steps to the left of a yellow mark and 3 steps to the right of a grey mark. He tosses a coin. If it comes up heads, he moves one step to the right, otherwise he moves one step to the left. He keeps doing this until he reaches one of the two marks, and then he stops. At which mark does he stops? A: he stops at 21 coin tosses. B: he obtains three more tails than heads.

- (a) 2
- (b) 3
- (c) 4
- (d) 1

57. A sheet of paper has statements numbered from 1 to 10. For all values of n from 1 to 10, statement n says: 'Exactly n of the statements on this sheet are false.' Which statements are true and which are false?

- (a) The even numbered statements are true and the odd numbered statements are false.
- (b) The second last statement is true and the rest are false.
- (c) The odd numbered statements are true and the even numbered statements are false.
- (d) All the statements are false.

58. There are two boxes, one contains 47 red balls and the other containing 46 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is

- (a).75
- (b) .50
- (c) .25
- (d) .51

59. Consider two vessels, the first containing one liter of ink and the second containing one liter of cola. Suppose you take one glass of ink out of the first vessel and pour it into the second vessel. After mixing you take one glass of mixture from the second vessel and pour it back into the first vessel. Which one of the following statements holds now?

- (a) There is as much cola in the first vessel as there is ink in the second vessel.
- (b) None of the statements holds true.
- (c) There is more cola in the first vessel than ink in the second vessel.
- (d) There is less cola in the first vessel than ink in the second vessel.

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### Latest TCS Fresher Job Interview Paper Pattern 16, January 2011

Company Name: TCS

Type: Fresher, Job Interview, Written Test.

Hello TCS aspirants.

If TCS comes to our college, there is a great chance for you to be recruited. So don't neglect your preparation. 20 days preparation is enough if you prepare seriously. You must be proficient in your technical skills. A good CV/resume increases your chance. In our college TCS gave their CV format, and I think that they do it for everyone. If you are from non computer trade (for eg. I

was from Electrical Engineering) please let them know politely dat u do not know programming good enough (by chance if that was the case) but you must be well aware of your trade subjects and yes last but not the least practice the aptitude questions with the correct procedures. (don't memories the answers from here and there)

Enough of "gain") Now let me give the questions.

Aptitude Test:

35 questions to be solved online in 80 minutes.

1. On planet zorba, a solar blast has melted the ice caps on its equator. 8 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of a circle and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4 * \sqrt{t - 8}$  for  $t = 8$

Where the represents the diameter in mm and t the number of years since the solar blast.

Jagan recorded the time of some echina at a particular spot is 24 years then what is diameter?

- (a) 8
- (b) 16
- (c) 25
- (d) 2

2. The IT giant Tirnop has recently crossed a head count of 150000 and earnings of \$7 billion. As one of the forerunners in the technology front, Tirnop continues to lead the way in products and services in India. At Tirnop, all programmers are equal in every respect. They receive identical salaries and also write code at the same rate. Suppose 12 such programmers take 12 minutes to write 12 lines of code in total. How long will it take 72 programmers to write 72 lines of code in total? (appeared for three times for me in one they asked me to calculate no of programmers, in another total number of minutes were asked, and in the other total number of lines of codes was asked)

- (a) 6
- (b) 18
- (c) 72
- (d) 12

3. A circular dartboard of radius 1 foot is at a distance of 20 feet from you. You throw a dart at it and it hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

- (a) 0.75
- (b) 1
- (c) 0.5
- (d) 0.25

4. After the typist writes 12 letters and addresses 12 envelopes, she inserts the letters randomly into the envelopes (1 letter per envelope). What is the probability that exactly 1 letter is inserted in an improper envelope?

- (a) 0
- (b) 1/41
- (c) 11/12
- (d) 1-1/41

5. Given 3 lines in the plane such that the points of intersection form a triangle with sides of length 20, 20 and 20, the number of points equidistant from all the 3 lines is

- (a) 4
- (b) 3
- (c) 1
- (d) 0

6. For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A's chances of winning.

7. Let's assume such rumors to be true and that in a match between Ghana and Bolivia, Ghana the stronger team has a probability of 9/10 of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?

- (a) .55
- (b) .81
- (c) 1
- (d) .82

8. Mr. Beans visited a magic shop and bought some magical marbles of different colors along with other magical items. While returning home whenever he saw a colored light, he took out marbles of similar colors and counted them. So he counted the pink colored marbles and found that he has bought 25 of them. Then he counted 14 green marbles and then 21 yellow marbles. He later counted 30 purple colored marbles with him. But when he reached a crossing, he looked at a red light and started counting red marble sand found that he had bought 23 Red marbles. As soon as he finished counting, it started raining heavily and by the time he reached home he was drenched. After reaching home he found that the red, green and yellow marbles had magically changed colors and became white, while other marbles were unchanged. It will take 1 day to regain its colors, but he needs to give at least one pair of marbles to his wife now. So how many white marbles must be choose and give to his wife so as to ensure that there is at least one pair of red, yellow and green marbles ?

- (a) 46
- (b) 35
- (c) 29
- (d) 48

9. Alok and Bhanu play the following min-max game. Given the expression:

$$N = 9 + X + Y - Z$$

Where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be

- (a) 0
- (b) 27

- (c) 18
- (d) 20

(This question appeared 2 times for me, the equation in the other was :  $N = 40 + X * (Y - Z)$ )

10. Given a collection of points  $P$  in the plane , a 1-set is a point in  $P$  that can be separated from the rest by a line, .i.e the point lies on one side of the line while the others lie on the other side. The number of 1-sets of  $P$  is denoted by  $n_1(P)$ . The minimum value of  $n_1(P)$  over all configurations  $P$  of 5 points in the plane in general position (.i.e. no three points in  $P$  lie on a line) is:

- (a) 3
- (b) 5
- (c) 2

11. 45 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true?

- (a) All suspects are lying
- (b) leftmost suspect is guilty

- (a) A only
- (b) Both A and B
- (c) B only
- (d) C only

12. Alice and Bob play the following coins-on-a-stack game. 50 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack. Alice starts and the players take turns. A turn consists of moving the coin on the top to a position  $i$  below the top coin ( $0 = i = 20$ ). We will call this an  $i$ -move (thus a 0-move implies doing nothing). The proviso is that an  $i$ -move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coin is the third coin from the top. Then

- (a) In order to win, Alice's first move should be a 0-move.
- (b) In order to win, Alice's first move should be a 1-move.
- (c) Alice has no winning strategy.
- (d) In order to win, Alice's first move can be a 0-move or a 1-move.

13. A sheet of paper has statements numbered from 1 to 70. For all values of  $n$  from 1 to 70. Statement  $n$  says ' At least one of the statements on this sheet are false. ' Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The odd numbered statements are true and the even numbered are false.
- c) The first 35 statements are true and the last 35 are false.
- d) The first 35 statements are false and the last 35 are true.

14. A sheet of paper has statements numbered from 1 to 40. For all values of  $n$  from 1 to 40, statement  $n$  says: 'Exactly  $n$  of the statements on this sheet are false.' Which statements are true

and which are false?

- (a) The even numbered statements are true and the odd numbered statements are false.
- (b) The odd numbered statements are true and the even numbered statements are false.
- (c) All the statements are false.
- (d) The 39th statement is true and the rest are false.

15. Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 46 km/hr and the distance traveled by the Ferrari is 953 km, find the total time taken for Rohit to drive that distance.

- (a) 20.72
- (b) 5.18
- (c) 238.25
- (d) 6.18

16. Alok is attending a workshop ‘How to do more with less’ and today’s theme is Working with fewer digits. The speakers discuss how a lot of miraculous mathematics can be achieved if mankind (as well as womankind) had only worked with fewer digits. The problem posed at the end of the workshop is ‘How many 6 digit numbers can be formed using the digits 1, 2, 3, 4, 5 (but with repetition) that are divisible by 4?’ Can you help Alok find the answer?

- (a) 3125
- (b) 4583
- (c) 7124
- (d) 2534

17. A hare and a tortoise have a race along a circle of 100 yards diameter. The tortoise goes in one direction and the hare in the other. The hare starts after the tortoise has covered 1/5 of its distance and that too leisurely. The hare and tortoise meet when the hare has covered only 1/8 of the distance. By what factor should the hare increase its speed so as to tie the race?

- (a) 37.80
- (b) 8
- (c) 40
- (d) 5

18. A lady has fine gloves and hats in her closet- 18 blue, 32 red, and 25 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that it is a glove. How many gloves must she take out to make sure she has a pair of each color?

- (a) 50
- (b) 8
- (c) 60
- (d) 42

19.  $(\frac{1}{3})$  of a number is 5 more than the  $(\frac{1}{6})$  of the same number?

- (a) 5

- (b) 30
- (c) 18
- (d) 27

20. Middle- earth is a fictional land inhabited by hobbits, elves, dwarves and men. The hobbits and elves are peaceful creatures that prefer slow, silent lives and appreciate nature and art. The dwarves and the men engage in physical games. The game is as follows. A tournament is one where out of the two teams that play a match, the one that loses get eliminated. The matches are played in different rounds, where in every round; half of the teams get eliminated from the tournament. If there are 7 rounds played in knock out tournament, how many matches were played?

- (a) 255
- (b) 256
- (c) 79
- (d) 127

21. The pace length P is the distance between the rear of two consecutive footprints. For men, the formula,  $n/P = 144$  gives an approximate relationship between n and P where, n = number of steps per minute and P = pace length in meters. Bernard knows his pace length is 164cm. The formula applies to Bernard's walking. Calculate Bernard's walking speed in kmph.

- (a) 23.62
- (b) 8.78
- (c) 11.39
- (d) 236.16

22. There are two boxes, one containing 10 red balls and the other containing 10 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is

- (a) 3/4
- (b) 37/38
- (c) 1/2
- (d) 14/19

23. On the planet Oz, there are 8 days in a week- Sunday to Saturday and another day called Oz day. There are 36 hours in a day and each hour has 90 min while each minute has 60 sec. As on earth, the hour hand covers the dial twice every day. Find the approximate angle between the hands of a clock on Oz when the time is 12:40 am.

- (a) 71
- (b) 251
- (c) 111
- (d) 89

24. There was a question to calculate the number of spherical coins in a 4 D space. {The rest I forgot.}

Apart from these there are also many types of patterns in this website and many other resources, do practice them and also take open see same test. I was absolutely sure of the answers of 32 questions so I attended 32, and by God's grace I cleared this round with ease. Answer the

questions which you are absolutely sure.

If u face any problems regarding the solutions of these type of aptitude questions.

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**Latest TCS Fresher Job Interview Paper Pattern : 24th-January-2011**

Company Name : **TCS**

Type : **Fresher**

Job Interview, **Question Paper**

Dear Friend's, I am belong to Gaya and I will attend the TCS recruitment Process at Gaya.

1. (1/3) of a number is 3 more than the (1/6) of the same number?

- a) 6
- b) 16
- c) 18
- d) 21

Ans: 18

2. There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160 in tank B. (At the end of first hour, B has 10 liters, second hour it has 20 liters and so on). If tank B is 1/4 filled of the 10 hours, what is total duration of hours required to fill it completely?

- a) 12
- b) 25
- c) 05
- d) 27

Ans: 12

3. Samita was making a cube with dimensions 5\*5\*5 using 1\*1\*1 cubes. What is the number of cubes needed to make a hollow cube looking of the same shape? If we are painting only 2 face of each cube then how many faces will remain unpaint???

- a) 98
- b) 104
- c) 538
- d) 650

Ans: 538

Sol:  $(5*5*5 - 3*3*3) = 125 - 27 = 98$ \*no of faces =  $98 * 6 = 588$ -(no of sides painted) =  $588 - 50 = 538$

4. Middle- earth is a fictional land inhabited by hobbits, elves, dwarves and men. The hobbits and elves are peaceful creatures that prefer slow, silent lives and appreciate nature and art. The dwarves and the men engage in physical games. The game is as follows. A tournament is one where out of the two teams that play a match, the one that loses get eliminated. The matches are played in different rounds, where in every round; half of the teams get eliminated from the tournament. If there are 8 rounds played in knock out tournament, how many matches were played?

- a) 257
- b) 256

c) 72

d) 255

Ans: 255

Sol:  $2^{n-1} = 2^8 - 1 = 255$

5. Mr. bean having magical balls 25 pink, 10 green, 31 red, 31 yellow, 30 purple. He drenched in rain red, green, and yellow turn into white what is the maximum probability of a pair of same color ?

Ans :  $31+31+2$ (worst case probability)= 64

6. There is 22 friends (A1, A2, A3....A22).If A1 have to have shake with all without repeat. How many handshakes possible?

a) 6

b) 21

c) 28

d) 7

Ans: 21 since cycle will not form.

7. we are having 54 men doing hand shake in set what will be minimum required hand shakes for minimum 1 hand shake?

Ans : {1,2,3,4,5,6,.....54}

Set= { 2,5,8,.....53}

So 1 set will be ans 18

8. On planet korba, a solar blast has melted the ice caps on its equator. 9 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of circle, and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4*v(t-9)$  for  $t = 9$  where  $d$  represents the diameter in mm and  $t$  the number of years since the solar blast. Jagan recorded the radius of some echina at a particular spot as 7mm. How many years back did the solar blast occur?

a) 17

b) 21.25

c) 12.25

d) 14.05

9. Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.

a) 20.72

b) 3.5

c) 238.25

d) 6.18

10. A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says ' At least n of the statements on this sheet are false. 'Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The odd numbered statements are true and the even numbered are false.
- c) The first 35 statements are true and the last 35 are false.
- d) The first 35 statements are false and the last 35 are true.

Sol: when

Rule 1: exact ( n-1)th will be true and other will be false

Rule2: At least (first half will be true)

Rule 3: At most (all true)

Example : exactly 40 statement 39th will be true other than it false

11. If there are 254 barrels out of them one is poisoned if a person tastes very little he will die within 14 hours so if there are mice to test and 24 hours to test, how many mice are required to find the poisoned can?

- a) 3
- b) 2
- c) 6
- d) 8

Ans :  $2^n > \text{no of barrels}$

Then n=will be required mice N=8

12. Consider two tumblers, the first containing Water and next contains coffee. Suppose you take one spoon of water out of the first tumbler and pour it into the second tumbler. After moving you take one spoon of the mixture from the second tumbler and pour it back into the first tumbler . Which one of the following statement holds now?

- a) There is less coffee in the first tumbler than water in the second tumblers
- b) There is more coffee in the first tumbler than water in the second tumbler
- c) There is as much coffee in the first tumbler as there is water in the second tumbler
- d) None of the statements holds true

Ans: both will be equal

13. Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line, that is the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The minimum value of  $n_1(P)$  over all configurations P of 5 points in the plane in general position (that is no three points in P lie on a line) is

- a)3
- b)5
- c) 2
- d)1

Ans: 5 same as given no of points

14. The citizens of planet nigiet are 8 fingered and have thus developed their decimal system in base 8. A certain street in nigiet contains 1000 (in base 8) buildings numbered 1 to 1000. How many 3s are used in numbering these buildings?

- a) 54
- b) 64
- c) 265
- d) 192

Ans: 192

Some times base value is change like: 9finger, 1 to 100(base 9)

$$\text{For } 1..100 = 2x$$

$$\text{For } 1....1000 = 3*x^2$$

15. Given 3 lines in the plane such that the points of intersection form a triangle with sides of length 20, 20 and 30, the number of points equidistant from all the 3 lines is

- a)1
- b)3
- c)4
- d)0

Ans: 4

16. Hare in the other. The hare starts after the tortoise has covered 1/3 of its distance and that too leisurely. A hare and a tortoise have a race along a circle of 100 yards diameter. The tortoise goes in one direction and the. The hare and tortoise meet when the hare has covered only 1/8 of the distance. By what factor should the hare increase its speed so as to tie the race?

- a) 30.33
- b)8
- c) 40
- d) 5

Ans: 30.33

Sol:  $1/3, 1/8$

$$3*8=24$$

$$(24-3)=21$$

$$(21-8)=13$$

$$(21*13)/3^2$$

17. Here 10 programmers, type 10 lines with in 10 minutes then 60lines can type within 60 minutes. How many programmers are needed?

- a) 16
- b) 6
- c) 10
- d) 60

Solution:  $(\text{men} * \text{time}) / \text{work}$

Ans: 10

This type of Q's repeated 4times for me but values are different.

18. Alok and Bhanu play the following min-max game. Given the expression  $N = 9 + X + Y - Z$

Where X, Y and Z are variables representing single digits (0 to 9) Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be.

- a) 0
- b) 27
- c) 18
- d) 20

The Q's concept is same but the equation of N's is changing.

19. Alice and Bob play the following coins-on-a-stack game. 20 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack. Alice starts and the players take turns. A turn consists of moving the coin on the top to a position  $i$  below the top coin ( $0 = i = 20$ ). We will call this an  $i$ -move (thus a 0-move implies doing nothing). The proviso is that an  $i$ -move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coins the third coin from the top. Then

- a) In order to win, Alice's first move should be a 1-move.
- b) In order to win, Alice's first move should be a 0-move.
- c) In order to win, Alice's first move can be a 0-move or a 1-move.
- d) Alice has no winning strategy.

Ans: d

20. For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A's chances of winning. Let's assume such rumors to be true and that in a match between Ghana and Bolivia, Ghana the stronger team has a probability of  $2/3$  of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?

- a) $1/9$
- b) $4/9$
- c) $5/9$
- d) $2/3$

Ans:  $5/9$

Q21. 36 people  $\{a_1, a_2, \dots, a_{36}\}$  meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs,  $\{a_1, a_2\}, \{a_2, a_3\}, \dots, \{a_{35}, a_{36}\}, \{a_{36}, a_1\}$ . Then size of the smallest set of people such that the rest have shaken hands with at least one person in the set is

- a)12
- b)11
- c)13

d)18

Ans: 12

22. After the typist writes 12 letters and addresses 12 envelopes, she inserts the letters randomly into the envelopes (1 letter per envelope). What is the probability that exactly 1 letter is inserted in an improper envelope?

a)1/12

b)0

c)12/212

d)11/12

Ans: b

23. A sheet of paper has statements numbered from 1 to 40. For each value of  $n$  from 1 to 40, statement  $n$  says "At least  $n$  of the statements on this sheet are true." Which statements are true and which are false?

a) The even numbered statements are true and the odd numbered are false.

b) The first 26 statements are false and the rest are true.

c) The first 13 statements are true and the rest are false.

d) The odd numbered statements are true and the even numbered are false.

Ans: c

24. There are two boxes, one containing 10 red balls and the other containing 10 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is

a)1/2

b)14/19

c)37/38

d)3/4

Ans: 14/19

25. A circular dartboard of radius 1 foot is at a distance of 20 feet from you. You throw a dart at it and it hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

a) 0.75

b) 1

c) 0.5

d) 0.25

Ans: d

26. On planet zorba, a solar blast has melted the ice caps on its equator. 8 years after the ice melts, tiny plantoids called echina start growing on the rocks. echina grows in the form of a circle and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4 * \sqrt{t - 8}$  for  $t = 8$  Where  $d$  represents the diameter in mm and  $t$  the number of years since the solar blast. Jagan recorded the time of some echina at a particular spot is 24 years then what is diameter?

- a) 8
- b) 16
- c) 25
- d) 21

Ans: 16

27. A sheet of paper has statements numbered from 1 to 40. For all values of n from 1 to 40, statement n says: 'Exactly n of the statements on this sheet are false.' Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered statements are false.
- b) The odd numbered statements are true and the even numbered statements are false.
- c) All the statements are false.
- d) The 39th statement is true and the rest are false.

Ans: d

28. Alok and Bhanu play the following coins in a circle game. 99 coins are arranged in a circle with each coin touching two other coins. Two of the coins are special and the rest are ordinary. Alok starts and the players take turns removing an ordinary coin of their choice from the circle and bringing the other coins closer until they again form a (smaller) circle. The goal is to bring the special coins adjacent to each other and the first player to do so wins the game. Initially the special coins are separated by two ordinary coins O1 and O2. Which of the following is true?

- a) In order to win, Alok should remove O1 on his first turn.
- b) In order to win, Alok should remove one of the coins different from O1 and O2 on his first turn.
- c) In order to win, Alok should remove O2 on his first turn.
- d) Alok has no winning strategy.

Ans: a if the gold coin in 3rd position then mark it otherwise leave it

29. Two pipes A and B fill at A certain rate B is filled at 10, 20, 40, 80. If 1/4 of B is filled in 21 hours what time it will take to get completely filled

Ans: 23

30. One day Alice meets pal and byte in fairyland. She knows that pal lies on Mondays, Tuesdays and Wednesdays and tells the truth on the other days of the week byte, on the other hand, lies on Thursdays, Fridays and Saturdays, but tells the truth on the other days of the week. Now they make the following statements to Alice – pal. Yesterday was one of those days when I lie byte. Yesterday was one of those days when I lie too. What day is it?

- a) Thursday
- b) Tuesday
- c) Monday
- d) Sunday

Ans: a

.

31. Sudha Patel +> perfume factory

Ans : 2 more cedar

32. A toy train can make 10 sounds sound changes after every 4 minute now train is defective and can make only 2 sounds find probability that same sound is repeated 4 times consecutively (1 OUT OF\_\_)?

- a 16
- b 8
- c 12
- d 4

Ans:

$$(1/2)*(1/2)*(1/2)*(1/2)+(1/2)*(1/2)*(1/2)*(1/2)=(1/8)$$

thus 1 out of 8 ans

33. In there is a planet Oz in which there is 36 hrs in a day & 90 minutes in a hrs and 60 seconds in 1 minute it is having same pattern as our watch. Then what will be angle between hour hand and minute hand at 9:40?

- a) 29
- b) 12
- c) 67
- d) 98

Ans :29

34. In a country x we are having diff types of coins ranging from 64...512. All coins having different integral value the difference between two coins comes out to be 50% more than the former coin. Then how many coins can be made?

Ans : 6 coins

Sol.64

$$64*1.5=96$$

$$96*1.5=144$$

$$144*1.5=216$$

$$216*1.5=324$$

$$324*1.5=486$$

Then total coin will be 6

35. There is a relation is given which is  $n/P=195$  Where n- no of steps in meters P- pace length These Is a man shivam he know his pace length =185cm then what will be the speed of shivam kmph?

$$\text{Ans}=195*1.85*1.85*60/1000=40.04\text{kmph}$$

Exam/Interview Date : 24-Jan-2011

No of Rounds : Aptitude Test

Contributor Name : Shivam Gupta

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### Latest TCS Fresher Job Interview Paper Pattern : 10th, Dec 2010

Company Name : TCS

Type : Fresher

Job Interview, Question Paper

All 90% question from previous paper. Open see same mock test question also comes as it is.

1. A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says ' At least n of the statements on this sheet are false. ' Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The odd numbered statements are true and the even numbered are false.
- c) The first 35 statements are true and the last 35 are false.
- d) The first 35 statements are false and the last 35 are true.

2. Consider two tumblers, the first containing one liter of coffee. Suppose you take one spoon of water out of the first tumbler and pour it into the second tumbler. After moving you take one spoon of the mixture from the second tumbler and pour it back into the first tumbler . Which one of the following statement holds now?

- a) There is less coffee in the first tumbler than water in the second tumbler.
- b) There is more coffee in the first tumbler than water in the second tumbler
- c) There is as much coffee in the first tumbler as there is water in the second tumbler
- d) None of the statements holds true

3. Lady has fine gloves and hats in her closet- 18 blue- 32 red and 25 yellow. The lights are out and it is totally dark inspite of the darkness. She can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each colour?

- a) 50
- b) 8
- c) 60
- d) 42

4. Alok and Bhanu play the following coins in a circle game. 99 coins are arranged in a circle with each coin touching two other coin. Two of the coins are special and the rest are ordinary. Alok starts and the players take turns removing an ordinary coin of their choice from the circle and bringing the other coins closer until they again form a (smaller) circle. The goal is to bring the special coins adjacent to each other and the first player to do so wins the game. Initially the special coins are separated by two ordinary coins O1 and O2. Which of the following is true?

- a) In order to win, Alok should remove O1 on his first turn.
- b) In order to win, Alok should remove one of the coins different from O1 and O2 on his first turn.
- c) In order to win, Alok should remove O2 on his first turn.
- d) Alok has no winning strategy.

5. In the year 2002, Britain was reported to have had 4.3m closed – circuit television (CCTV) cameras – one for every 14 people in the country . This scrutiny is supposed to deter and detect crime. In one criminal case, the police interrogates two suspects . The ratio between the ages of the two suspects is 6:5 and the sum of their ages is 6:5 and the sum of their ages is 55 years.

After how many years will the ratio be 8:7.?

- a) 11
- b) 6
- c) 10

d) 5

6. A question on hand shake which is from shakus puzzle buk formula is  $2^n = n(n-1)/2$  number of hand shakes problem 8 people attending party number of handshakes with cycle means  $8*7/2=28$  or if u find the word no cycle than answer is 7 one less

7. A problem on building number number of 2's or 3's or 4's etc upto 9 answer is always 20 (count 2 in 22 two times every body in this forms will written 8 its wrong its answer is 20 for 2-9 number and 21 for number of 1's because 100 is included. convert answer row base 10.1.

8. persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. hence the current average age has become 45. Find the age of seventh person?

9. The cost 1 plum is 1 cent ,2 apples is 1 cent,3 banana is 1 cent. if Rahul buys same amount of fruits for his 3 sons spending 7 cent den what amount of fruit each child will get?

10. 40, 80,160....if B filled in  $(1/16)$  the of a tank in 3 hours, how much time will it take to fill completely? Two years before Paul's age is 2times the Alice age and the present age of Paul is 6times the Alice. what is the presents Paul's age.

11. Ferrari is leading car manufacturer. Ferrari S.P.A. is an Italian sports car. it has enjoyed great success. If Mohan's Ferrari is 3 times faster than his old MERCEDES which gave him 35kmph...if Mohan traveled 490 km in his Ferrari. the hw much time he took?

### Simple puzzle based on IQ

- 3 persons a,b,c were there A always says truth lies on Monday, Tuesday, Wednesday. but C lies on Thursday, Friday & Saturday .one day A said" that B & C said to A that" B said "yesterday way one of the days when I lies", C said that "yesterday way one of the days when I lies too. then which day was that
- What is the value of  $x+4y/x-2y$ . Given  $x/2y=2$
- Alice lies on Mon, Tue, Wed and tells truth rest of the days. Bob lies on Thu, Fri, Sat and tells truth rest of the days.Both make a statement. Yesterday was one of the day when I lie to people. which day they made the statement.  
Ans: Thursday.
- Form 10 digit numbers from by using 1, 2,3,4,5 with repetition is allowed and must be divisible by4?
- In school there are some bicycles and 4wheeler wagons. one Tuesday there are 190 wheels in the campus. How many bicycles are there?  
 $N=4x+x-y$ . find mon and max value if input in range 0-9.
- If 7 person doing 7 hrs a day for 7 days complete the work. How many person r required for doing 16 hrs work in 16 day.
- A man has three points . he arranged them in form of triangle. Now how many pts are at same distance from all 3 pts.  
A cube of  $5*5*5$  has 5 surfaces painted red. If smaller cube of size  $1*1*1$  is taken out ,tell how many surfaces in total of cubes taken out left remain unpainted.

- Out of 20 peoples 19 person says my rightmost is guilty. If only 1 is guilty. what is true.
    - a. leftmost is guilty
    - b.all are telling lie,
    - c. rightmost is guilty.
  - Shake hand problem:(A1 –a2)-----(a18-a1) , tell how min no of set are there such that at least 1 has shake hand with someone.  
45 red, 8 green ball .probability of red ball.
  - 10 envelop e and 10 letters are there. What is the probability that exactly 1 letter goes in wrong envelope(ans.0)
  - $D=\text{pow}((t-1),1/2)$  , if  $t>15$  find p when  $t=27$ .
  - In a mixture, R is 2 parts S is 1 part. In order to make S to 25% of the mixture, how much r is to be added?
  - In which of the system, decimal number 184 is equal to 1234?
  - horse and tortoise walking around circle horse start after – time . if – speed of horse is equal to – speed of tortoise . find increase in tortoise speed. some problem like this.
- 

### Latest TCS Fresher Job Interview Paper Pattern: 24-Dec-2010

Company Name : TCS  
Type : Fresher  
Job Interview, Question Paper

Hi guys. TCS has arrived our college on 24 December 2010.

There were four rounds-

- Aptitude test
- Technical interview
- Management Round
- HR Round

Aptitude test(35 questions were asked, negative marking was there

1- $(1/3)$  of a number is 5 more than the  $(1/6)$  of the same number? find the no.

- a) 6
- b)36
- c)30
- d)72

2- There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160 in tank B. (At the end of first hour, B has 10 liters, second hour it has 20 liters and so on). If tank B is  $1/32$  filled of the 21 hours, what is total duration of hours required to fill it completely?

- a) 26
- b)25
- c)5

d)27

3- A man jogs at 6 mph over a certain journey and walks over the same route at 4 mph. What is his average speed for the journey?

- a) 2.4 mph
- b) 4.8 mph
- c) 4 mph
- d) 5 mph

4-A boy wants to make cuboids of dimension 5m, 6m and 7m from small cubes of .03 m<sup>3</sup>. Later he realized he can make same cuboids by making it hollow. Then it takes some cubes less. What is the number of the cubes to be removed?

- a) 2000
- b) 5000
- c) 3000
- d) 7000

$$5 - ((4x+3y)+(5x+9y))/(5x+5y) = ? \text{ as } (x/2y) = 2$$

- a)8
- b) none
- c)16
- d)15

6-1. A girl has to make pizza with different toppings. There are 8 different toppings. In how many ways can she make pizzas with 2 different toppings?

- a) 16
- b) 56
- c) 112
- d) 28

7-find x in the series 3, 15, x, 51, 53,159,161

8-A lady has fine gloves and hats in her closet- 18 blue, 32 red, and 25 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

- a) 50
- b) 8
- c) 60
- d) 42

9-n a family there are some boys and girls. All boys told that they are having equal no of brothers and sisters and girls told that they are having twice the no. of brothers than sisters. How many boys and girls present in a family?

- a) 4 boys and 3 girls
- b) 3 boys and 4 girls
- c) 2 boys and 5 girls
- d) 5 boys and 2 girls

10-Middle- earth is a fictional land inhabited by hobbits, elves, dwarves and men. The hobbits and elves are peaceful creatures that prefer slow, silent lives and appreciate nature and art. The dwarves and the men engage in physical games. The game is as follows. A tournament is one

where out of the two teams that play a match, the one that loses get eliminated. The matches are played in different rounds, where in every round; half of the teams get eliminated from the tournament. If there are 8 rounds played in knock out tournament, how many matches were played?

- a) 257
- b) 256
- c) 72
- d) 255

11-There is 7 friends (A1, A2, A3....A7).If A1 have to have shake with all without repeat. How many handshakes possible?

- a) 6
- b) 21
- c) 28
- d) 7

12-On planet korba, a solar blast has melted the ice caps on its equator. 9 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of circle, and the relationship between the diameter of this circle and the age of echina is given by the formula  $d = 4*v(t-9)$  for  $t = 9$  where  $d$  represents the diameter in mm and  $t$  the number of years since the solar blast. Jagan recorded the radius of some echina at a particular spot as 7mm. How many years back did the solar blast occur?

- a) 17
- b) 21.25
- c) 12.25
- d) 14.05

Solution: radius =7mm, then diameter  $2 * \text{radius}$ , substitute diameter the in above equation you will get answer

- a) 17 b) 34 c) 54 d) 112

13- A man goes 50Km north , then turned left walked 40Km, then turned right ? In which direction he is?

- a) North
- b) South
- c) East
- d) West

14-Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.

- a) 20.72
- b) 3.5
- c) 238.25
- d) 6.18

Solution: Speed of Ferrari =  $4 * 35 = 140$ , time = distance / velocity

15- A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says ' At least n of the statements on this sheet are false. ' Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The odd numbered statements are true and the even numbered are false.
- c) The first 35 statements are true and the last 35 are false.
- d) The first 35 statements are false and the last 35 are true.

16- A man goes north 37km.turns left goes 2km.turns right goes 17km.turns right goes 2km. find distance b/w starting ending point.

- a) 54
- b) 27
- c) 81
- d) 67

17-If there are 30 cans out of them one is poisoned if a person tastes very little he will die within 14 hours so if there are mice to test and 24 hours to test, how many mice are required to find the poisoned can?

- a) 3
- b) 2
- c) 6
- d) 1

18-Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line, the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The minimum value of  $n_1(P)$  over all configurations P of 5 points in the plane in general position (.i.e no three points in P lie on a line) is

- a) 3
- b) 5
- c) 2
- d) 1

19-Alok and Bhanu play the following min-max game. Given the expression  
 $N = 9 + X + Y - Z$  Where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be

- a) 0
- b) 27
- c) 18
- d) 20

The Q's concept is same but the equation of N's is changing.

20-Alice and Bob play the following coins-on-a-stack game. 20 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack. Alice starts and the players take turns. A turn consists of moving the coin on the top to a position  $i$  below the top coin ( $0 = i = 20$ ). We will call this an  $i$ -move (thus a 0-move implies doing nothing). The proviso is that an  $i$ -move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coins the third coin from the top. Then

- a) In order to win, Alice's first move should be a 1-move.
- b) In order to win, Alice's first move should be a 0-move.
- c) In order to win, Alice's first move can be a 0-move or a 1-move.
- d) Alice has no winning strategy.

21-For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A's chances of winning. Let's assume such rumors to be true and that in a match between Ghana and Bolivia, Ghana the stronger team has a probability of  $2/3$  of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?

- a)  $1/9$
- b)  $4/9$
- c)  $5/9$
- d)  $2/3$

22-A sheet of paper has statements numbered from 1 to 40. For each value of  $n$  from 1 to 40, statement  $n$  says "At least  $n$  of the statements on this sheet are true." Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The first 26 statements are false and the rest are true.
- c) The first 13 statements are true and the rest are false.
- d) The odd numbered statements are true and the even numbered are false.

23-Alok and Bhanu play the following coins in a circle game. 99 coins are arranged in a circle with each coin touching two other coin. Two of the coins are special and the rest are ordinary. Alok starts and the players take turns removing an ordinary coin of their choice from the circle and bringing the other coins closer until they again form a (smaller) circle. The goal is to bring the special coins adjacent to each other and the first player to do so wins the game. Initially the special coins are separated by two ordinary coins O1 and O2. Which of the following is true?  
a) In order to win, Alok should remove O1 on his first turn.

- b) In order to win, Alok should remove one of the coins different from O1 and O2 on his first turn.
- c) In order to win, Alok should remove O2 on his first turn.
- d) Alok has no winning strategy.

24-On planet zorba, a solar blast has melted the ice caps on its equator. 8 years after the ice melts, tiny planetoids called echina start growing on the rocks. echina grows in the form of a circle and the relationship between the diameter of this circle and the age of echina is given by the formula

$d = 4 * \sqrt{t - 8}$  for  $t = 8$  Where  $d$  represents the diameter in mm and  $t$  the number of years since the solar blast.

Jagan recorded the time of some echina at a particular spot is 24 years then what is diameter?

25-Here 10 programmers, type 10 lines with in 10 minutes then 60lines can type within 60 minutes. How many programmers are needed?

- a) 16
- b) 6
- c) 10
- d) 60

26-The citizens of planet nigiet are 8 fingered and have thus developed their decimal system in base 8. A certain street in nigiet contains 1000 (in base 8) buildings numbered 1 to 1000. How many 3s are used in numbering these buildings?

- a) 54
- b) 64
- c) 265
- d) 192

27-Hare in the other. The hare starts after the tortoise has covered 1/5 of its distance and that too leisurely. A hare and a tortoise have a race along a circle of 100 yards diameter. The tortoise goes in one direction and the hare in the other. The hare and tortoise meet when the hare has covered only 1/8 of the distance. By what factor should the hare increase its speed so as to tie the race?

- a) 37.80
- b) 8
- c) 40
- d) 5

Ans: 37.80

28-Given 3 lines in the plane such that the points of intersection form a triangle with sides of length 20, 20 and 30, the number of points equidistant from all the 3 lines is

- a) 1
- b) 3
- c) 4
- d) 0

29-How many 9 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by 4 if the repetition is allowed?

- a) 57
- b) 56

- c)59
- d)58

30-Amrith told to Anand in front of a Photo that “He is the son of my father’s son”. Find who is in the picture if amrith have no brothers and sisters.

- a) Amrith himself
- b) Amrith’s Uncle
- c) Amrith’s Father
- d) Amrith’s son

31-A lady had fine gloves and hats. 25 blue, 7 red and 9 gey. She had to select a pair among them. But there was no light so she had to select in darkness the correct pair with a glove and a hat. Therefore how many combinations of same color she can select?

32-The difference between two no is 9 and the product of the two is 14.What is the square of their sum?

- a) 120
- b) 130
- c) 137
- d) 145

33-0 men and 10 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa?

- a) 22
- b) 20
- c) 10
- d) none

34-In a family there are some boys and girls. All boys told that they are having equal no of brothers and sisters and girls told that they are having twice the no. of brothers than sisters. How many boys and girls present in a family?

- a) 4 boys and 3 girls
- b) 3 boys and 4 girls
- c) 2 boys and 5 girls
- d) 5 boys and 2 girls

35-A toy train produces 10 different sounds when it moves around a circular toy track of radius 5 m at 10 m per min. However, the toy train is defective and it now produces only 2 different tunes at random. What are the odds that the train produces for consecutive music tones of the same type?

- a) 1 in 16
- B) 1 in 4
- c) 1 in 8
- d) 1 in 32

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SET : 1

1. There is a toy train that can make 10 musical sounds. It makes 2 musical sounds after being defective. What is the probability that one musical sound would be produced 5 times consecutively? (1 of \_\_)?
2. Peter and Paul ate two friends. The sum of their ages is 35 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the present age of Peter?
3. The ages of two friends is in the ratio 6:5. The sum of their ages is 66. After how many years will the ages be in the ratio 8:7?

Ans:-12

4. There are 5 materials to make a perfume: Lilac, Balsamic, Lemon, Woody and Mimosaic. To make a perfume that is in demand the following conditions are to be followed: Lilac and Balsamic go together. Woody and Mimosaic go together, Woody and balsamic never go together. Lemon can be added with any material. All of the following combinations are possible to make a perfume EXCEPT:

- (a) Balsamic and Lilac
- (b) Woody and Lemon
- (c) Mimosaic and Woody
- (d) Mimosaic and Lilac

Ans:-4

5. A girl has a make pizza with different toppings. There are 8 different toppings. In how many ways can she make pizzas with 2 different toppings?

Ans- $nC2 * 2$

6. A triangle is made from a rope. The sides of the triangle are 25 cm, 11 cm and 31 cm. what will be the area of the square made from the same rope?

Ans-16.752 cm<sup>2</sup>

7. what is the distance between the z-intercept from the x-intercept in the equation  $ax+by+cz+d=0$ .

Ans (- d/a)

8. An athlete decides to run the same distance in 1/4th less time than she usually took. By how percent will she have to increase her average speed?

Ans-300%

9. A horse chases a pony 3 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 35 kmph, what is the average speed of the pony?

Ans-20kmph

10. There is 7 friends (A1,A2,..A7). If A1 have to have shake with all without repeat. How many hand shakes possible?

Ans-6

11. There are two pipes A and B. If A filled 10 liters in an hour B can fills 20 liters in same time. Likewise B can fill 10, 20, 40, 80, 160, .if B filled in  $(1/6)$  the of the tank in 3 hours, how much

time will it take to fill completely?

12. 10 tables, 4chairs per table, each table has different number of people then how many tables will left without at least one person.

13. The age of two friends is in the ratio 5:6, after how many years will the ages be in the ratio 7:8?

14. A men whose age is 45 yrs has 3 sons named Johan, Jill and Jack. He went to a park weekly twice. He loves his sons very much. On a certain day he finds shopkeepers selling different things. An apple cost 1penny, 2chocalate costs 1penny, & 3 bananas cost 1penny. He has bought equal no. of apple, chocolate and banana for each son. If the total amount he invest is 7 penny then how many he has bought from each piece for his son?

- (a) 1app, 1 chow, q banana
- (b) 1app, 2cho, 3banana
- (c) 1app, 2cho, 1banana

Ans:-c

15. A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he traveled 1mile in north direction and reached at North Pole. There he saw a bear he then followed the bear around 1hr with a speed of 2km/hr in east direction. After that he traveled in south direction and reached at his lab in 2 hrs. Then what is the colour of the bear?

- (a) white (b) black (c) grey (d) brown

16. In a particular city there are 100 homes numbered from 1,2,3.....100. The city was build by a builder from Chennai. There were 4 to 5 shops in the town which was build by a builder from Mumbai. THE 2nd builder can build in  $\frac{1}{2}$  time as compared to 1st builder. If the 2nd builder builds in 15 days, then how many 2's are used by the builder from Chennai in numbering the 100 homes?

- (a) 17 (b) 18 (c) 19 (d) 20

17. Mr. Das has 3 sons whose ages are respectively a, b, c. The grandfather has bought a cycle for the eldest son, mother has bought a bag for the youngest one which cost Rs. 150/. The sum of two age of the elder son and one son is 15. The difference of the age of sons is 3 & 2. Then what is the age of the elder son?

- (a) 10 (b) 11 (c) 12 (d) 13

Ans:-10

18. We all know that Aryabhatta is the greatest mathematician who belongs to India. When his daughter Mayabati was in her teen age he discovered a problem. At that time the age of Mayabati is a prime number, let that age is A . After some years her age becomes B. then Aryabhatta was able to solve that problem with the help of his daughter Mayabati. If  $a-b=5$  & product of a & b is 26 then what is the sum of two squares?

Ans-77

19. How many 13 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by

4 if repetition of digits is allowed?

$$20. (40*40*40-31)/(40*40*40*31+31*31)=?$$

$$21. x/2y=2a, \text{ then } 2x/x-2ay=?$$

$$\text{Ans}-(4-x)/2$$

22. Mr. Behera wants to build a house for his wife. In this there are 5 rooms each having equal area. The length of each room is 4m,, breadth is 5m. The height of the rooms is 2m. If to make a sq meter we need 17 bricks, then how many bricks are needed to make the floor of a particular room?

$$\text{Ans}-140$$

23. On Tuesday College parking palace have only 4wheelers and bicycles, total no of wheels was 182, then what is the possible no of bicycles?

(a) 20

(b) 19

(c) 18

(d) 17

24. On average age something like a, b, c weighted separately 1st a, b, c, then a & b, then b &c , then c 7 a at last abc, then last weight was 167, then what will be the avg. weight of the 7 weight?

25. Arrange the jumbled letters to make a perfect word RGTEI. Find to which category it belong?

(a) Town

(b) vegetable

(c) animal

(d) bird

26. 3 persons a, b, c were there A always says truth, B lies on Monday, Tuesday and Wednesday. But C lies on Thursday , Friday and Saturday. One day A said “ that B and C said to A that” B said” yesterday way one of the days when I lies”, C said that” yesterday way one of the days when I lies too”. Then which day was that?

(a) Sunday

(b) Thursday

(c) Saturday

(d) Tuesday

27. A mathematical series present like: 8 6 17 35 30 71 \_ 143.

28. One man want to build a wall the length and breadth of the wall are 20, 30 respectively, he need 35 bricks for one square centimeter then how many bricks he need?

29. One person had three children. He has 7 pennies. Then how he can distribute the fruits among his child by following conditions.

(a) He can get one water millon for 1 penny.

- (b) He can get 2 oranges for 1 penny.
- (c) He can get 3 grapes for 1 penny.

30. 1/3rd of a number are more 3 than the 1/6th of a number then find the number?

31. In T nagar many buildings were under residential category for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. How many time 6 will appear in building numbering?

Ans-26

32. One grand father has 3 grand child. Eldest one are is 3 times of the youngest child age. Sum of two youngest child age is more than two of eldest one age. Find the eldest one age?

33. The difference b/w two numbers is 4. And their product is 17. Then find the sum of their squares?

34. Find category from following Jumbles=d letters, PARAKEET

35. Which is the smallest digit when divides the 2880 gives perfect square.?

Ans-5

36. I don't have any brothers and sisters. By pointing a picture that man said that his father is my fathers Son then who is he?

Ans- is the man

37. 6 persons standing in queue with different age group, After two years their average are will be 43 and seventh person joined with them. Hence the current average age has become 45. Find the age of seventh parson?

38. The ratio b/w the ages of two persons is 6:5 and sum of there ages is 77 then how many years later there ratio becomes 8:7?

39. Horse started to chase a dog as it relieved stable two hrs ago. And horse started to ran with average speed 22km/hr, horse crossed 10 mts road and two small pounds with depth 3m, and it crossed two small streets with 200 mts length. After traveling 6hrs, 2hrs after sunset it got dog. Compute the speed of dog?

40. If six friend go to pizza corner there r 2 type s of pizzas. And six different flavors are there, they have to select 2 flavors from 6 flavors what's chances to select?

41. 3, 22, 7, 45, 15, ?, 31 Complete the series.

Ans 76

42. A & B takes are there 1/8th of the tank B filled in 22 Hrs. what is time to fill the tank full?

43. 5 friends went for week end party to Mc Donald's restaurant and there they measure there

weights final measure is 155 kg then find the average w=weight of 5 people?

Ans-31

44. 2 post are there. 1st pot is filled with ink and 2nd pot is filled with water take 1 spoon of ink from 1st pot and pore it in 2nd pot. And take 1 spoon pf mixture from 2 and pot ad pore it in 2nd pot then which one of following is true?

Lion said that today is one of those days when I lie.

Tiger said that today is one of those days when I lie too. Then find the day when both lie together?

45. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. Hence the current average age has become 45. Find the age of seventh person?

46.  $((4x+3y)+5x+9y)/(5x+5y)=?$  As  $(x/2y)=2$

47. If we subtract a number with y, we get 4 increase of number, once it got divided by y itself....Find the number??

48. I'm only son for my parents. The man in picture is my father's son. Who is he?

Ans-the man

49. A toy train can make 10 sounds sound changes after every 4 min now train is defective and can make only 2 sounds, find probability that same sound is repeated 3 times consecutively?

(a) 16 (b) 8 (c) 12 (d) 4

50. I have 3 grandsons. The age diff btw 2 of grandsons is X yrs. 1st grandson is twice elder than younger one addition off ages of all the three is y then what is age of eldest grandson?

Ans= $2(x+y)/5$

51. Ferrari is leading car manufacturer car . It has enjoyed great success. If Mohan's Ferrari is 3 times faster than his old MERCEDES which gave him 35 kmph if Mohan traveled 490 km in his Ferrari, then how much time (hours) he took?

(a).8

(b). 4

(c) 7

(d) 7

Ans-d (approx.)

52. Lion and rat stay in jungle happily. Lion lies on : MON TUE WED, RAT lies on : WED THURS SAT, if lion says : I didn't lie yesterday, RAT says : e1 didn't lie yesterday, so what day is today?

Ans: sunday

53. The ratio of current age of x and y is 5:7, after how many years their age ratio will b 7:9?

54. Inspired by Fibonacci series sanket decided to create his own series which is 1, 2, 3, 7, 7, 22, 15, 67,.....what number comes immediately before 67?

55. By using 1,2,3,4,5 how many 5 digit no. can be formed which is divisible by 4, repetition of no. is allowed?

Ans-30 explain-(5!/1!)/4=30

56. The cost of 1 plum is 1 cent, 2 apples is 1 cent, 3 bananas is 1% if Rahul buys same amount of fruits for his 3 sons

Ans appending 7 cent den what amount of fruit each child will get?

57. 2880 is divided by which smallest no. so we get no. 1 which is perfect square?

Ans=5

58. There are two prime numbers, the addition of two prime no is 13, and multiplication is 21, den what is the sum of their squares?

Ans=107

59. Smita was making 1 design, size of larger cube to be made is 5\*5\*5 using smaller cubes of 1\*1\*1. She created solid larger cube.. Then she decided to make hollow cube. Then how many 1\*1\*1 cubes required to make hollow larger cube.

Ans-6L<sup>2</sup> -8=150-8=142

60.  $2x/5y = 5x/3y \dots$  den what is x/y

61. A pizza parlor provides pizzas. There were 2 toppings available initially pepperoni and salami.

but now they have introduced 8 new toppings to select from. A person wishes to buy two DIFFERENT pizzas of NEW toppings in how many ways he can do that??

62. Person travels to a place. If he goes from A to B with speed of 4kmph and return back to B with speed of 5 kmph. What is his avg. speed of journey?

Ans-(20/9)=2.22kmph

63. There is a dice having value from 1 to 6 on each face and a pack of cards having face card aces. When 2 dices are thrown and their scores are added then which sum will come max number of times?

(a) \* (b) 9 (c) 10 (d) 11

64. "Susha brought terilon cloth and rope to make a thing. If rope is 153 m long and it is to be cut into pieces of 1 m long then how many times will she have to cut it??

Ans-151 times

65. There are some 2 wheelers and 4 wheelers parked total number of wheels present is 240. Then how many 4 wheelers were there?

Ans-max(15)

66.  $\frac{1}{3}$  of a number is 6 more than  $\frac{1}{6}$  of that number then what is the number?

Ans-36

67. The cost of making a robot consists of material cost, repairing cost, coloring cost and is in the ratio 3:4:5, if the material cost is 1200 then find out the cost of the robot.

68. There are pepsi 1 liter and oil 1 liter. It is given is 1 spoon of Pepsi is taken and is mixed with Oil. Then 1 spoon oil and Pepsi is taken and is mixed with Pepsi then which of the condition holds true.

69. A tank is filled with water in first hour 10 lit, Second hour 20 lit and in 3 rd hour time 40 lit. If time taken fill  $\frac{1}{4}$  of the tank is 5 hr. what is the time required to fill up the tank.

Ans-10.45hr

70. Which is the smallest no divides 2880 and gives a perfect square?

Ans-5.

71. Two bowls are taken, one contains water and another contains tea. One spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl. Which statement will hold good for the above?

72. From 8 digit numbers from by using 1,2,3,4,5 with repetition is allowed and must be divisible by 4?

(a) 31250 (b) 97656 (c) 78125 (d) 97657

73. Rearrange and categorize the word ‘RAPETEKA’?

Ans-katerpeta

74. In school there are some bicycles and 4 wheeler wagons. One Tuesday there are 190 wheels in the campus. How many bicycles are there?

Ans-95

75. A lies on mon, tues, wed and speak truth on other days, B lies on thur, fri, sat and speaks truths on other days ....one day a said I lied today and B said I too lied today. What is the day?  
Ans-sunday

76. A father has 7 penny's with him and 1 water melon is for 1 p, 2 chickoos for 1 p, 3 grapes for 1p, he has three sons. How can he share the fruits equally?

77.  $(\frac{1}{2})$  of a number is 3 times more than the  $(\frac{1}{6})$  of the same number?

78. A man is standing before a painting a man and he says I have no brother and sister and his father is my father's son?

79. One question has last part like difference between two terms is 9 and product of two numbers

is 14, what is the squares of sum of numbers?

Ans-119

80. What is the value of  $[(3x+8y)/(x-2y)]$ ; if  $x/2y=2$ ?

Ans-10

81. A pizza shop made pizzas with two flavors in home. There are 'N' different flavors, in that 'M' flavors are taken to make pizza. In how many ways they can arrange?

Ans- $nCm$

82. One grandfather had three grandchildren, two fathers their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

83. In one organization material, labor and maintenance are in the ratio of 4:6:7, the material cost is 100, what is the total cost?

Ans-525

84. In a market 4 men are standing the average age of the four before 4 years is 45, after some days one man is added and his age is 49, what is the average weight of all?

85. In school for a student out of 100 got 74 of average for 7 subjects and he got 79 marks in 8th subjects. What is the average of all the subjects?

86. In a question, last part has the age of two people has the ratio of 6:6 and by adding the numbers we get 44, after how many years the ratio would be 8:7?

87. One train travels 200m from A to B with 70 km/ph and returns to A with 80kmph, what is the average of their speed?

Ans-75 km/hr

88. Two years before Paul's age is 2 times the Alice age and the present age of Paul is 6times the Alice. What is the present Paul's age?

Ans-(-3)

89. There is Ferrari and Benz car, Benz speed is say 10kmph and it covers 10 km. and if Ferrari goes with 3 times faster than Benz. So in how much time Ferrari could take to cover same distance.

Ans-1/3

90. If one land has 3 daughters and any out of 3 have difference of ages is 3 and oldest is 3 times of more than 2 then youngest ate 2 then tell the age of oldest daughter.

91. If a person moves 15km straight and turns 45km right and moves 15km straight then how much distance he needs to walk to reach starting point?

Ans-45km

92. If there are 30 cans out of them one is poisoned if a person tastes very little he will die within 14 hours so if there are mice to test and 24 hours how many mice are required to find the poisoned can?

93. If A and B mixed in 3:5 ration and B, C are mixed in 8:5 ration if the final mixture is 35 liters, find the amount of b in the final mixture.

$$\text{Ans}-(40/99)*35=14.14$$

94.  $1!+2!+\dots+50!=3*10^{64}$ ?

95. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. Hence in the current average age has become 45. Find the age of seventh person?

Ans-59

96. If we subtract a number with y, we get 4 increase of number, once it got divided by y itself....find that number?

Ans-3

97. It is the class with the seating arrangement in 4 rows and 8 columns. When the teacher says 'start the girl who is sitting in first row and first column will say 1, then the next girl sitting behind her will say 4, the next girl sitting behind that girl will say 7, in a particular order each girl is telling a number, the following girls told 10, 13 next turn is yours what you will say?

98. It is dark in my bedroom and I want to get two socks of the same color from my drawer, which contains 24 red and 24 blue socks. How many socks do I have to take from the drawer to guarantee at least two socks of the same color?

(a) 2 (b) 3 (c) 48 (d) 25

99. 100 the cost 1 plum is 1 cent, 2 apples is 1 cent, 3 bananas is 1 cent, if Rahul buys same amount of fruits for his 3 sons spending 7 cent then what amount of fruit each child will get?

Ans-1plum, 2apples, 1bananas

All The Best.

Date of Exam: 12th, January 2011.

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### TCS Aptitude Question Paper : 2011

1. There are seventy clerks working in a company, of which 30 are females. Also, 30 clerks are married; 24 clerks are above 25 years of age; 19 married clerks are above 25 years, of which 7 are males; 12 males are above 25 years of age; and 15 males are married. How many bachelor girls are there and how many of these are above 25?

2. A man sailed off from the North Pole. After covering 2,000 miles in one direction he turned West, sailed 2,000 miles, turned North and sailed ahead another 2,000 miles till he met his

friend. How far was he from the North Pole and in what direction?

3. Here is a series of comments on the ages of three persons J, R, S by themselves.

S : The difference between R's age and mine is three years.

J : R is the youngest.

R : Either I am 24 years old or J 25 or S 26.

J : All are above 24 years of age.

S : I am the eldest if and only if R is not the youngest.

R : S is elder to me.

J : I am the eldest

R : S is not 27 years old.

S : The sum of my age and J's is two more than twice R's age.

One of the three had been telling a lie throughout whereas others had spoken the truth.

Determine the ages of S,J,R.

4. In a group of five people, what is the probability of finding two persons with the same month of birth?

5. A father and his son go out for a 'walk-and-run' every morning around a track formed by an equilateral triangle. The father's walking speed is 2 mph and his running speed is 5 mph. The son's walking and running speeds are twice that of his father. Both start together from one apex of the triangle, the son going clockwise and the father anti-clockwise. Initially the father runs and the son walks for a certain period of time. Thereafter, as soon as the father starts walking, the son starts running. Both complete the course in 45 minutes. For how long does the father run? Where do the two cross each other?

6. The Director of Medical Services was on his annual visit to the ENT Hospital. While going through the out patients' records he came across the following data for a particular day : " Ear consultations 45; Nose 50; Throat 70; Ear and Nose 30; Nose and Throat 20; Ear and Throat 30; Ear, Nose and Throat 10; Total patients 100." Then he came to the conclusion that the records were bogus. Was he right?

7. Amongst Ram, Sham and Gobind are a doctor, a lawyer and a police officer. They are married to Radha, Gita and Sita (not in order). Each of the wives have a profession. Gobind's wife is an artist. Ram is not married to Gita. The lawyer's wife is a teacher. Radha is married to the police officer. Sita is an expert cook. Who's who?

8. What should come next?

1, 2, 4, 10, 16, 40, 64,

Questions 9-12 are based on the following : Three adults – Roberto, Sarah and Vicky – will be traveling in a van with five children – Freddy, Hillary, Jonathan, Lupe, and Marta. The van has a driver's seat and one passenger seat in the front, and two benches behind the front seats, one beach behind the other. Each bench has room for exactly three people. Everyone must sit in a seat or on a bench, and seating is subject to the following restrictions: An adult must sit on each bench. Either Roberto or Sarah must sit in the driver's seat. Jonathan must sit immediately beside

Marta.

9. Of the following, who can sit in the front passenger seat ?

- (a) Jonathan (b) Lupe (c) Roberto (d) Sarah (e) Vicky

10. Which of the following groups of three can sit together on a bench?

- (a) Freddy, Jonathan and Marta (b) Freddy, Jonathan and Vicky
- (c) Freddy, Sarah and Vicky (d) Hillary, Lupe and Sarah
- (e) Lupe, Marta and Roberto

11. If Freddy sits immediately beside Vicky, which of the following cannot be true ?

- a. Jonathan sits immediately beside Sarah
- b. Lupe sits immediately beside Vicky
- c. Hillary sits in the front passenger seat
- d. Freddy sits on the same bench as Hillary
- e. Hillary sits on the same bench as Roberto

12. If Sarah sits on a bench that is behind where Jonathan is sitting, which of the following must be true ?

- a. Hillary sits in a seat or on a bench that is in front of where Marta is sitting
- b. Lupe sits in a seat or on a bench that is in front of where Freddy is sitting
- c. Freddy sits on the same bench as Hillary
- d. Lupe sits on the same bench as Sarah
- e. Marta sits on the same bench as Vicky

13. Make six squares of the same size using twelve match-sticks. (Hint : You will need an adhesive to arrange the required figure)

14. A farmer has two rectangular fields. The larger field has twice the length and 4 times the width of the smaller field. If the smaller field has area K, then the area of the larger field is greater than the area of the smaller field by what amount?

- (a) 6K (b) 8K (c) 12K (d) 7K

15. Nine equal circles are enclosed in a square whose area is 36sq units. Find the area of each circle.

16. There are 9 cards. Arrange them in a 3\*3 matrix. Cards are of 4 colors. They are red, yellow, blue, green. Conditions for arrangement: one red card must be in first row or second row. 2 green cards should be in 3rd column. Yellow cards must be in the 3 corners only. Two blue cards must be in the 2nd row. At least one green card in each row.

17. Is z less than w? z and w are real numbers.

- (I)  $z^2 = 25$
- (II)  $w = 9$

To answer the question,

- a) Either I or II is sufficient

- b) Both I and II are sufficient but neither of them is alone sufficient
- c) I & II are sufficient
- d) Both are not sufficient

18. A speaks truth 70% of the time; B speaks truth 80% of the time. What is the probability that both are contradicting each other?

19. In a family 7 children don't eat spinach, 6 don't eat carrot, 5 don't eat beans, 4 don't eat spinach & carrots, 3 don't eat carrot & beans, 2 don't eat beans & spinach. One doesn't eat all 3. Find the no. of children.

20. Anna, Bena, Catherina and Diana are at their monthly business meeting. Their occupations are author, biologist, chemist and doctor, but not necessarily in that order. Diana just told the neighbour, who is a biologist that Catherine was on her way with doughnuts. Anna is sitting across from the doctor and next to the chemist. The doctor was thinking that Bena was a good name for parent's to choose, but didn't say anything. What is each person's occupation?

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Company Name : TCS  
Type : Fresher, Job Interview

Hello friends, This is Saurabh I am a student in electronics and communication at Gyan Ganga Institute of Technology and Sciences Jabalpur. In our college there was a TCS campus at 24th January 2011.the campus was being conducted in three phases. The first phase was the written round which was online written test. The next two rounds was conducted on 25th January 2011.The second phase was the TECHNICAL INTERVIEW (the most important interview) .The third phase was the HR round. In our college a total of 278 students were eligible for written. Out of which 245 students cleared the written test and reached the next phase of technical interview.

The online written paper for the TCS is given below:

1. The IT giant Tirnop has recently crossed a head count of 150000 and earnings of \$7 billion.As one of the forerunners in the technology front,Tirnop continues to lead the way in products and services in India.At Tirnop,all programmer are equal in every respect.they receive identical salaries ans also write code at the same rate.suppose 12 such programmers take 12 minutes to write 12 lines of code in total.how long will it take 72 programmer to write 72 lines of code in total?

- (a) 72
- (b) 12
- (c) 6
- (d) 18

2. Ferrari S.p.A. is an Italian sports car manufactured based in Maranello, Italy.Founded by Enzo Ferrari in 1928 as scuderia Ferrari,the company sponsored drivers and manufactured race cars before moving into production of street legal vehicles in 1947 as Ferrari S.p.A. through its history,the company has been noted for its continued participation in racing,especially in Formula one,where it has enjoyed great success.Rohit once bought a Ferrari.It could go 2 times as fast as Mohit's old Mercedes.if the speed of Mohit's Mercedes is 32km/hr and the distance travelled by the Ferrari is 952 km, find the total time taken for Rohit to drive that distance.

- (a) 15.88

- (b) 14.88
- (c) 476
- (4) 29.75

3. A hare and tortoise have a race along a circle of 100 yards diameter. the tortoise goes in one direction and the hare in the other.the hare starts after the tortoise has covered 1/5 of its distance and that too leisurely. the hare and tortoise meet when the hare has covered only 1/8 of the distance.by what factor should the hare increase its speed so as to tie the race?

- (a) 8
- (b) 40
- (c) 37.80
- (4) 5

NOTE: The trick for this question is that the answer with the decimal is wright because the software has some flaw which gives a decimal in this question. But it's not with other questions.

4. There are two water tanks A and B,A is much smaller than B.while water fills at the rate of one litre every hour in A,it gets filled up like 10,20,40,80,160...in tank B.(at the end of first hour,B has 10 litre.second hour it has 20, and so on).if 1/32 of B's volume is filled after 3 hours,what is the total duration required to fill it completely?

- (a) 10 hours
- (b) 9 hours
- (c) 8 hours
- (d) 7 hours

5. Alok and Bhanu play the following min-max game. Given the expression.

$N = 12 + X * (Y - Z)$  Where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be -

- 2
- 69
- 93
- 30

NOTE: The trick for the answer is that remember three formulae for this kind of question:

$$X+Y-Z=11; X-Y-Z=2; X*(Y-Z)=18$$

Directly put the value and find the answer

6. A Sheet of paper has statements number from 1 to 20.Statement n says "At least n of the statements on this sheet are true".which statements are true and which are false.

- a.The even no statements are true and the odd no statements are false.
- b. The 1st 13 statements are false and rest are true.
- c. The 1st 6 statements are true and rest are false
- d. The odd no statements are true and even no. are false.

7. On the planet Oz, there are 8 days in a week- Sunday to Saturday and another day called Oz day. There are 36 hours in a day and each hour has 90 min while each minute has 60 sec. As on

earth, the hour hand covers the dial twice every day.

Find the approximate angle between the hands of a clock on Oz when the time is 12:40 am.

8. Form 8 digit numbers from by using 1, 2,3,4,5 with repetition is allowed and must be divisible by 4.

9. Subha Patel is an olfactory scientist working for International Flavors and Fragrances. She specializes in finding new scents recorded and reconstituted from nature thanks to Living Flower Technology. She has extracted fragrance ingredients from different flowering plants into bottles labeled herbal, sweet, honey, anisic and rose. She has learned that a formula for a perfume is acceptable if and only if it does not violate any of the rules listed: If the perfume contains herbal, it must also contain honey and there must be twice as much honey as herbal. If the perfume contains sweet, it must also contain anisic, and the amount of anisic must equal the amount of sweet. honey cannot be used in combination with anisic. anisic cannot be used in combination with rose. If the perfume contains rose, the amount of rose must be greater than the total amount of the other essence or essences used. Which of the following could be added to an unacceptable perfume consisting of two parts honey and one part rose to make it acceptable?

- a. Two parts rose
- b. One part herbal
- c. Two parts honey
- c. One part sweet

10. A sheet of paper has statements numbered from 1 to 40. For each value of n from 1 to 40, statement n says "At least n of the statements on this sheet are true." Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The first 26 statements are false and the rest are true.
- c) The first 13 statements are true and the rest are false.
- d) The odd numbered statements are true and the even numbered are false.

11.( There was a very big question which was having no meaning)There is Ferarri and a Benz car.Benz speed is 10km/h and it covers 10 km. if the Ferarri goes 3 times faster than benz,in how much time Ferarri would take to cover the same distance??

12. (some nonsense paragraph)there are 60 barreals are there and one is poisoned. If a drop is consumed he will die in 14 hrs then how many least mice are required to find the poisoned barreal?if we have only 24 hour.

13. A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says ' At least n of the statements on this sheet are false. ' Which statements are true and which are false?

- a) The even numbered statements are true and the odd numbered are false.
- b) The odd numbered statements are true and the even numbered are false.
- c) The first 35 statements are true and the last 35 are false.
- d) The first 35 statements are false and the last 35 are false.

14. the citizen of planet OZ are 6 fingered and they developed the number system in base 6.A certain street in OZ has 1000 buildings and they are numbered 1 to 1000.How many no. of 3's are used?Express your answer in base 10.

- a. 144
- b. 54
- c. 108
- d. 36

15. A hallow cube of 5cm is taken, with thickness of 1 cm. It is made of smaller cudes of 1 cm. If 5 faces of outer cude are painted, then totally how many smaller cubes surfaces reamin unpainted?

- a) 475
- b) 900
- c) 775
- d) 463

16. There are certain numbers of hats and gloves in a box. they are 41 red, 23 green, 11 orange. power goes off. but a woman can differentiate betwn hats and gloves. how many draws are required to obtain a pair of each color.

17. (some nonsense story)(1/2)of a number is 3 times more than the (1/6)of the same number. what is that number?

18. After the typist writes 12 letters and addresses 12 envelopes she inserts the letters randomly into the envelopes (one letter per envelope). what is the probability that exactly one letter is inserted in an improper envelope?

- a) 0
- b) 11/12
- c) 1/12
- d) 12/212

19. Alok and Bhanu play the following coins in a circle game. 99 coins are arranged in a circle with each coin touching two other coin. Two of the coins are special and the rest are ordinary. Alok starts and the players take turns removing an ordinary coin of their choice from the circle and bringing the other coins closer until they again form a (smaller) circle. The goal is to bring the special coins adjacent

to each other and the first player to do so wins the game. Initially the special coins are separated by two ordinary coins O1 and O2. Which of the following is true ?

- a. In order to win, Alok should remove O1 on his first turn.
- b. In order to win, Alok should remove one of the coins different from O1 and O2 on his first turn.
- c. In order to win, Alok should remove O2 on his first turn.
- d. Alok has no winning strategy.

20. The IT giant Tiroop has recently crossed a head count of 150000 and earnings of \$7 billion. As one of the forerunners in the technology front, Tiroop continues to lead the way in products and services in India. At Tiroop, all programmer are equal in every respect. They receive identical salaries and also write code at the same rate. Suppose 10 such programmers take 10 minutes to write 10 lines of code in total. How long will it take 7 programmers to write 7 lines of code in total?

21. In planet OZ planet there are 8 days, Sunday to Saturday and 8th day is Oz day. There is 36 hours in a day. What is angle between 12.40?

22. There are two boxes one containing 10 red balls and other containing 10 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random an a ball

at random from that box the probability of getting a ball is maximised. find the maximum probability.

- 1)  $14/19$ ,
- 2)  $3/4$ ,
- 3)  $1/2$ ,
- 4)  $37/38$

23. Alice and Bob play the following coins-on-a-stack game. 20 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack.

24. Alice starts and the players take turns. A turn consists of moving the coin on the top to a position  $i$  below the top coin ( $0 = i = 20$ ). We will call this an  $i$ -move (thus a 0-move implies doing nothing). The proviso is that an  $i$ -move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move.

If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coin is the third coin from the top. Then

- a. Alice has no winning strategy.
- b. In order to win, Alice's first move should be a 1-move.
- c. In order to win, Alice's first move can be a 0-move or a 1-move.
- d. In order to win, Alice's first move should be a 0-move....

25. a bag contains 4 white and 3 black balls. 2 balls are drawn one at a time, randomly in succession. what is the probability that both the balls drawn out are white in color, if the first ball is not replaced after the first draw?

- (A)  $9/49$
- (B)  $3/7$
- (C)  $2/7$
- (D)  $4/7$
- (E)  $16/49$

26. A CIRCULAR RADIUS OF DASH BOARD 2.0 FOOT IS AT DISTANCE 20 FEET FROM U .U THROW A DART AT IT IT HIT THE DASH BOARD AT SOME POINT Q IN A CIRCLE. WHATS THE PROBABILITY THAT Q IS CLOSER TO CENTRE OF CIRCLE THAN THE PERIFERY.

- 1) 0.25
- 2) 0.75
- 3) 0.50
- 4) 1.0

27. It is dark in my bedroom and I want to get two socks of the same color from my drawer, which contains 24 red and 24 blue socks. How many socks do I have to take from the drawer to get at least two socks of the same color?

- a) 2
- b) 3
- c) 48
- d) 25

28. A lady has fine gloves and hats in her closet- 26 blue, 30 red, and 56 yellow. The lights are out and it is totally dark. In spite of the darkness, she can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color?

29. A sheet of paper has statements numbered from 1 to 30. For all values of n from 1 to 30, statement n says "At most n of the statements on this sheet are false". Which statements are true and which are false?

- a) all odd are false and even are true
- b) alleven are true and odd are false
- c) all are false
- d) none of these

30. Anup managed to draw 7 circles of equal radii with their centres on the diagonal of a square such that the two extreme circles touch two sides of the square and each middle circle touches two circles on other side. Find the ratio of the radius of the circle to the side of the square.

- a.  $(2+7\sqrt{2}):1$
- b.  $1:(2+7\sqrt{2})$
- c.  $1:(2+6\sqrt{2})$
- d.  $1:(4+7\sqrt{3})$

31. There are 7 friends (A1, A2, A3, ..., A7). If A1 has to have shake with all without repeat. How many hand shakes possible?

32. (don't remember the full question but was a little bit same) there was one question about the triangle. The triangle was having three sides. The value of the three sides was given and the line joining the center with three points. How many points are there. The answer for this problem was 4

33. Same question as the one described in above questions.

34. same question as the one described in above questions.

35. same question as the one described in above questions.

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#### TCS Fresher Job Interview Paper Pattern : 2011

Company Name: TCS

Type: Fresher, Job Interview

Hi Friends.

These questions are asked in exam.

1: There is a toy train that can make 10 musical sounds. It makes 2 musical sounds after being defective. What is the probability that same musical sound would be produced 5 times consecutively? ( 1 of \_\_\_\_\_ ) ?

Answer:  $1/2 * 1/2 * 1/2 * 1/2 * 1/2 = 1/32$

32 will be the answer.

2: Peter and Paul are two friends. The sum of their ages is 35 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the present age of Peter?

Answer: 20 years.

3: The ages of two friends is in the ratio 6:5. The sum of their ages is 66. After how many years will the ages be in the ratio 8:7?

Answer: 12 years.

4: (There was a long story, I'll cut short it). There are 5 materials to make a perfume: Lilac, Balsalmic, Lemon, Woody and Mimosaic. To make a perfume that is in demand the following conditions are to be followed: Lilac and Balsalmic go together. Woody and Mimosaic go together, Woody and Balsalmic never go together. Lemon can be added with any material. (Actually they had also mentioned how much amount of one can be added with how much quantity of the other; but that's not needed for the question.) All of the following combinations are possible to make a perfume EXCEPT:

- 1) Balsalmic and Lilac
- 2) Woody and Lemon
- 3) Mimosaic and Woody
- 4) Mimosaic and Lilac

Answer: Mimosaic and Lilac.

5: A girl has to make pizza with different toppings. There are 8 different toppings. In how many ways can she make pizzas with 2 different toppings.

Answer:  $8 * 7 = 56$

6: A triangle is made from a rope. The sides of the triangle are 25 cm, 11 cm and 31 cm. What will be the area of the square made from the same rope?

Answer: 280.5625

7: What is the distance between the z-intercept from the x-intercept in the equation  $ax+by+cz+d=0$ . (I do not remember the values of a,b,c,d)

8: An athlete decides to run the same distance in 1/4th less time than she usually took. By how much percent will she have to increase her average speed?

Answer: 33.33%

9: A horse chases a pony 3 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 35 kmph, what is the average speed of the pony?

10: There are 7 friends (A1,A2,A3....A7). If A1 have to have shake with all without repeat. How many hand shakes possible?

11: There are two pipes A and B. If A filled 10 liters in a hour B can fill 20 liters in same time. Likewise B can fill 10, 20, 40, 80, 160....if B filled in  $(1/16)$ th of a tank in 3 hours, how much time will it take to fill completely?

Answer: 7 hours

12: (Keywords): Sports readers, 10 tables, 4 chairs per table, each table has different number of people then how many tables will be left without at least one person?

Ans: 6

13: The ages of two friends is in the ratio 5:6. After how many years will the ages be in the ratio 7:8?

Answer: 10 years.

14: What is the distance of the z-intercept from the x-intercept in the equation  $ax+by+cz+d=0$ . (I do not remember the values of a,b,c,d)

15: An athlete decides to run the same distance in 1/4th less time that she usually took. By how much percent will she have to increase her average speed?

Answer: 33.33%

16. A man whose age is 45 yrs has 3 sons named John, jill, jack. He went to a park weekly twice. he loves his sons very much. On a certain day he find # shop kippers sailing different things. An apple cost 1penny, 2chocalate costs 1penny.& 3 bananas cost 1 penny. He has bought equal no. of apple, chocolate & banana for each son. If the total amount he invest is 7 penny then how many he has bought from each piece for his son?

- a)1app,1cho,1 banana
- b)1 app,2cho,3 banana
- c)1app,2cho,1banana

17. A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he travelled 1mile in north direction & reached at north pole. there he saw a bear .he then followed the bear around 1 hr with a speed of 2km/hr in east direction.After that he travelled in south direction & reached at his lab in2 hrs. Then what is the colour of the bear? I think ans is white

- a) white
- b) black
- c) gray
- d) brown

18. In a particular city there are 100 homes numbered from 1,2,3.....100. The city was build by a builder from Chennai. There was 45 shop in the town which was build by a builder from Mumbai. THE 2nd builder can build the in  $\frac{1}{2}$  time as compared to 1st builder. If the 2nd builder builds in 15 days, then how many 2's are used by the builder from Chennai in numbering the 100 homes?

- a)17
- b)18
- c)19
- d) 20

19.MR dash has 3 sons whose ages are respectively a,b,c. The grandfather has bought a cycle for the eldest son, mother has bought a bag for the youngest one which cost Rs150/. The sum of two age of the elder son & one son is 15.The difference of age of sons is 3 & 2.Then what is the age of the eldest son?

- a)10,
- b)11,
- c) 12,
- d)13

20. We all know that Arya bhatta is the greatest mathematics belongs to India . When his daughter Mayabati was in her teen age he discovered a problem. At that time the age of mayabati is a prime number,let that age is a. After some years her age becomes b. then Arya Bhatta was able to solve that problem wit the help of he daughter mayabati. If  $a-b=5$  & product of a& b is 26

then what is the sum of two squares?

- A)77
- b) 45
- c)89
- d)67

21.how many 13 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by 4 if repetition of digits is allowed? Ans:5 to the power 12

22.  $(40*40*40-31*31*31)/(40*40+40*31+31*31)=?$ a smile calculation

23.  $x/2y=2a$ ,then  $2x/x-2ay=?$ (some thing like this .very easy )

24. A big Question describing a story. After that a number is given eg 2880.by what if we divide the number it will become a perfect square?

Ans:5

25. 1st a story. Then a simple ratio problem. The question was if the ratio of age of two persons is 5:6,sum of present age is 33,then in how many years the ratio of their age becomes 7:8?

- a) 3
- b) 4
- c) 5
- d)6

26. Mr behera wants to build A house for his wife. In this there are 5 rooms each having equal area. The length of each room is 4m,,breadth is 5 m. the height of the rooms are 2m. if to make a sq meter we need 17 bricks ,then how many bricks are needed to make the floor of a particular room?

27. A very big story.on Tuesday college parking place have only 4wheelers & bicycles,total no of wheels was 182,yhen what is the possible no of bicycles?

- a) 20
- b 19
- c 18
- d 17

28. Simple question but big one on average age's like a,b,c weighted separately 1st a,b,c ,then a& b, then b&c ,then c&a at last abc, the last weight was 167,then what will be the avg weight of the 7 weight?

29. Arrange the jumbled letters to make a perfect word RGTEI (sth like this). Find to which category it belong? (not so easy,I was bt able 2 solve the problem .the number of the question was 34)

- A) town
- b) vegetable
- c) animal
- d) bird

30. 3 persons a,b,c were there A always says truth,B lies on Monday,tusday,& Wednesday.but C lies on thrusday,Friday & saturday .one day A said"that B & C said to A that" B said "yesterday way one of the days when I lies",C said that"yesterday way one of the days when I lies too".then which day was that?

- a Sunday
- b Thursday
- c Saturday
- d. Tuesday

31.a long story & with in it a mathematical series present like

8 6 17 14 35 30 71 \_ 143.

32. One man want to build a wall the length and breadth of the wall are 20, 30 respectively. He need 35 bricks for one square centimeter then how many bricks he need?

Ans:  $l*b*35$ (no of bricks needed for sqcm)

33. one person had three children. he has 7 pennies. then how he can distribute the fruits among his child by following conditions.

- a) he can get one water millon for 1 penny.
- b) he can get 2 oranges for 1 penny.
- c) he can get 3 grapes for 1 penny.

Ans: 2 water millon 1 orange 1 grape

34.  $\frac{1}{3}$  rd of a number is more 3 than the  $\frac{1}{6}$ th of a number then find the number?

Ans: 18

35. In Tnagar many buildings were under residential category. for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many time 6 will appear in building numbering?

Ans:

For 1 to 10 - 1 six

2 to 20 - 1 six

Similarly upto 59 we utilise six, 5 times

from 60 to 69 (including 66) - 11 times

from 70 to 100 - 3, hence ans =  $5+11+3 = 19$

Ans: 19.

36. one grand father has 3 grand child. eldest one age is 3 times of the youngest child age .sum of two youngest child age is more than two of eldest one age. find the eldest one age?

Ans: 15 (we can easily predict from options, as we take y as 15)

37. difrence b/w two numbers is 4.and their product is 17.then find the sum of their squares?

Ans: 70 (By using  $(x-y)^2=x^2+y^2-2xy$ )

38. I don't remember exactly the question, one logical problem stating the color of beer?

Ans: white.

39. find category from following Jumbled letters, parakeet (answer)

Ans: bird (category)

40. which is the smallest digit when divides the 2880 gives perfect square.?

Ans: 5 (we can easily predict from options, as we divides them with 2880)

41. I don't have any brothers and sisters by pointing a picture that man said that his father is my fathers.son then who is he?

Ans: his son.

42. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. hence the current average age has become 45. find the age of seventh person?

Solution: Here the question appear as an easy one, but carried a lot of unwanted sentences and unwanted datas (i dint mention above) in exam which may confuse u on solving technique.

So now we can compute x from above equation. ( $x = 41$ ,  $6x = 246$ )

Let now we compute y,  $((6x+y)/7) = 45$ , as we have value of x, compute y.

Ans: 69

43. The ratio b/w the ages of two persons is 6:5. and sum of there ages is 77 then how many years later there ratio becomes 8:7?

Ans: we can easily predict from options

44. Horse started to chase dog as it relieved stable two hrs ago. And horse started to ran with average speed 22km/hr, horse crossed 10 mts road and two small pounds with depth 3m, and it crossed two small street with 200 mts length. After traveling 6 hrs, 2hrs after sunset it got dog. compute the speed of dog?

Ans: As we have speed and travel time of horse, we can get distance travelled by it...

Hence  $d = 22*6 = 132$ km,

Exactly this 132km was travelled by dog in 8 hours (as it started two hours earlier).

Hence speed of dog =  $132/8 = 16.5$ km/hr

Ans: 16.5km/hr.

45..six friends go to pizza corner there r 2 types of pizzas.and six different flavors r there they has to select 2 flavors from 6 flavors what's chances to select?

Ans: 6C2

46. 3, 22, 7, 45, 15, ?, 31

Solution: Here it appear simple, because it arranged in arranged in sequence manner, but the actual question was some what twist mentioning fibonacci series and more over question was in statements (no numbers).. hence first try to understand the question well.

here let group alternate terms 3,7,15,31 ( $3+4=7$ ,  $7+8=15$ ,  $15+16=31$ )

Similarly for second group (22,45,?) ( $22+23=45$ ,  $45+46=91$ ) hence ans is 91.

47. cycles and 4 wheelers problem?

Ans: We can easily predict from options

48. some irreverent data. in last two lines problem will be there. One man walks certain distance with 5 kmph. and walk back the same

Ans: A

49. A and B tanks r there.  $1/8$ th of the tank B is filled in 22Hrs. what is time to fill the tank full?

50. 5 friends went for week end party to Mc Donald's restaurant and there they measure there weights .some irrelevant data final measure is 155 kg then find the average weight of 5 people?

Ans:  $155/5=31$

51. 2 pots r there. 1st pot is filled with ink and 2nd pot is filled with water take 1 spoon of ink from 1st pot and pore it in 2nd pot and take 1 spoon of mixture from 2nd pot and pore it in 2nd pot then which one of following is true?

Ans: Water in 1st pot is less than the ink in 2nd pot.

52: One electronic problem? Ohm's law

Ans:  $V=IR$

53. There r ten spots in library and each spot has 4 tables and ten readers ar there . sorry I don't remember complete question?

Ans: None

54: lion and tiger are there lion lies on Monday, tues, wends and tiger lies on thurs, frid, sat.

Lion said that today is one of those days when I lies.

Tiger said that today is one of those days when I lie too Then find today?

Ans: Thursday

55. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. hence the current average age has become 45. find the age of seventh person?

Solution: it is given as after 2 yr average age wiil be 43 so now the average is 2 yr.

After addition of 7th person avg is 45 so 7th person wiil be  $45+(6*(45-4))$

Ans: 69

56. Horse started to chase dog as it relieved stable two hrs ago. And horse started to ran with average speed 22km/hr, horse crossed 10 mts road and two small pounds with depth 3m, and it crossed two small street with 200 mts length. After traveling 6 hrs, 2hrs after sunset it got dog. compute the speed of dog?

Ans: As we have speed and travel time of horse, we can get distance traveled by it...

Hence  $d = 22*6 = 132\text{km}$ ,

Exactly this 132km was travelled by dog in 8 hours (as it started two hours earlier).

Hence speed of dog =  $132/8 = 16.5\text{km/hr}$

Ans:16.5km/hr.

57. 3, 22 , 7, 45, 15, ?, 31

Solution: Here it appear simple, because it arranged in arranged in sequence manner, but the actual question was some what twist mentioning fibonacci series and more over question was in statements (no numbers).. hence first try to understand the question well.

here let group alternate terms  $3,7,15,31$  ( $3+4 =7$ ,  $7+8 =15$ ,  $15+16=31$ )

Similarly for second group  $(22,45,?)$  ( $22+23 = 45$ ,  $45+46 = 91$ ) hence

Ans: is 91.

58. In Tnagar many buildings were under residential category.for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many time 6 will appear in building numbering?

Ans: this type of question if it is asked how many 2,3,4,5,6,7,8,9 then you bindly write the answer as 20.but for 1 answer wiil be 21 as 100 is included

59.  $((4x+3y)+(5x+9y))/(5x+5y) = ?$  as  $(x/2y) = 2$

Ans: as  $x=2y$  put the value and get the answer.

60: If we subtract a number with y, we get 4 increase of number, once it got divided by y itself.. Find that number??

Ans: 12 (we can easily predict from options, as we take y as 6)

61. I don't remember exactly the question, one logical problem stating the colour of beer?  
Ans: white. what ever the question about the color of beer means you wrote the answer as white because polar beer.this question is very lengthy don't burther about that.

62. Jumbled letters, parakeet (answer)

Ans: bird (category)

63. I am only son for my parents. (some irrelevant statements in the middle to distract u).The man in picture is my father's son.(some irrelevant statements).who is he?

64.A toy train can make 10 sounds sound changes aftr every 4 min.....now train is defective and can make only 2 sounds.....find probability that same sound is repeated 3 times consecutively(1 OUT OF\_\_)?

1.16

2.8

3.12

4.4

ANS:  $(1/2) * (1/2) * (1/2) = (1/8)$  thus 1 out of 8

66. I have 3 grandsons.....

age diff btw 2 of grandsons X yrs

1st grandson is twice elder than younger one

addition off ages of all the three is y

then what is age of eldest grandson?? (there is some value in X and Y)

67. Ferrari is leading car manufacturer.\*Ferrari S.p.A.\* is an Italian sports car .....

It has enjoyed great success.

If Mohan's Ferrari is 3 times faster than his old MERCEDES wich gave him 35 kmph

if Mohan traveled 490 km in his Ferrari

the hw much time (hours) he took??

1.8

2.4

3.7

4.7.33

(options may be different)

68.lion rat stayin in jungle happily.....

Lion lies on : MON TUE WED

RAT lies on :WED THURS SAT

if lion says : I didnt lie yesterday

RAT says : e1 i didnt lie yesterday

so what day is today??

69. The ratio of current age of X and Y is 5:7,after hw many years der age ratio will b 7:9?

70. Inspired by Fibonacci series sanket decided to create is own series which is 1,2,3,7,7,22,15,67,....

like dish, then what no come immediately before 63?

Ans= 202

explanation ;check alternate no.1,3,7,15=> $n^2+1$  similarly 2,7,22,67======> $n^3+1$  so series is 1,2,3,7,7,22,15,67,31,202,63.....

71. By using 1,2,3,4,5,how many 5 digit no. can be formed which is divisible by 4,repetation of no. is allowed??

Ans: last 2 place should be divisible by 4

So possible values at last place are 12,24,32,44,52 this can be arranged in 5 ways

The rest 3 places can be filled in  $5^3$  way so total is  $5^4$

72. The cost 1 plum is 1 cent ,2 apples is 1 cent,3 banana is 1 cent.....

if Rahul buys same amount of fruits for his 3 sons spending 7 cent den what amount of fruit each child will get??

Ans: 1 plum ,2 apple,1 banana

xplanation: $7/3=2.333$  cents for each child

according to ans given for d sum each child will get 1 plum ,2 apple,1 banana

73. 2880 is divided by which smallest no. so we get no. which is perfect square???

Ans: 5

explanation  $2880/5=576$  sure sort question.

74. There are two prime no (with some nonsense stuff)..

den addition of two prime no is 13,n multiplication is 21,den what r some of there squares?

Explanation :  $XY=21$  and  $X+Y=13$ ...solve using calci..ans of X & Y will b in points then  $x^2+y^2=??$

75. Smita was makin 1 design .....(again some nonsense)....size of larger cube to be made is  $5^3$ .....

using smaller cubes of  $1^3$ ....she created solid larger cube ..den she decided to make hollow cube then hw many  $1^3$  cubes rqd to make hollow larger cube

Ans: 104

Explanation  $(25+25)+(15+15)+(12+12)=104$

76.  $2X/5Y=5X/3Y$ ...den wat is x/y

77. A pizza parlor provides pizzas...there were 2 toppings available initially pepperoni and salami. but now they,ve introduces 8 new toppings (some names) to select from.. a person wishes to buy two DIFFERENT pizzas of NEW topping....in how many ways he can do that??

Ans: 8 X 7=56

78. Person travels to....(some nonsense stuff)....if he goes from A to B with speed of 4kmph and returns back to B with speed of 5 kmph....what is his avg. speed of journey?? (values may b different)

Ans: 4.44(it's NOT 4.5)

Explanation :  $2PQ/(P+Q)=2*4*5/(4+5)=4.44$ kmph

79. There is a dice having value from 1 ..6 on each face and a pack of cards having face card aces.

(Hugh chunk of nonsense) when 2 dies are thrown and their scores are added then which sum will come max number of times??

1.8

2.9

3.10

4.11

Ans: 8

Explanation : 8----2,6 3,5 4,4

9----4,5 3,6

10----5,5 4,6

11---- 5,6

thus 8's probability is more

80. "Susha brought trillion cloth and rope to if rope is 153 mtr long and it is to be cut into pieces of 1 mtr long then how many times will she have to cut it??

Ans: 152 times

81. There are some 2 wheelers and 4 wheelers parked (some nonsense). Total number of wheels present is 240

then how many 4 wheelers were there

Ans: This can be done by looking at the option first check the no of bicycles and then multiply it by 2. And then subtract the multiplication value from 240 if the value is divided by 4 then that is the answer

82. 1/3 of a number is 6 more than 1/6 of that number then what is the number

Ans:  $x/3=x/6+6=36$

83. The cost of making a robot consists of material cost, repairing cost, coloring cost and is in the ratio 3:4:5.if the material cost is 1200 then find out the cost of the robot.

Ans: Simple 3 part is 1200 so  $3+4+5=12$  part=?

84. There are Pepsi 1 liter & oil 1 liter .it is given as 1 spoon of Pepsi is akin and is mixed with Oil. Then 1 spoon oil&Pepsi is taken and is mixed with Pepsi then which of the condition holds true.

Ans: The amount of Pepsi in oil is more than amount of oil in Pepsi.

85. An tank is filled with water .in first hour 10 lit ,in second hour 20 lit and in 3 rd hour time 40 lit. if time taken to fill  $\frac{1}{4}$  of the tank is 5 hr what is the time required to fill up the tank.

Ans: As the water is filled as twice speed and in 5 the hour  $\frac{1}{4}$ .so in 6 hour  $\frac{1}{2}$ .so answer 7th hour.

86. Which is the smallest no divides 2880 and gives a perfect square?

a.1 b.2 c.5 d.6

Ans: c

87. Two bowls are taken, one contains water and another contains tea one spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl. Which statement will hold good for the above?

Ans: second liquid in first bowl is smaller than the first mixture in second bowl

88. Form 8 digit numbers from by using 1, 2,3,4,5 with repetition is allowed and must be divisible by4?

a.31250 b.97656 c.78125 d.97657

Ans: c

89. Rearrange and categorize the word 'RAPETEKA'?

Ans: bird

87. In school there are some bicycles and 4wheeler wagons one Tuesday there are 190 wheels in the campus. How many bicycles are there?

Ans: 15

88. Key words in question (Fibonacci series, infinite series, in the middle of the question one number series is there....I got the series 3 12 7 26 15 ?

Ans: 54

(Logic:  $3*2+1=7$   $12*2+2=26$   
 $7*2+1=15$   $26*2+2=54$ )

89. A lies on mon, tues, wed and speak truths on other days, B lies on thur, fri, sat and speaks truths on other days ...one day a said I lied today and B said I too lied today. What is the day?

90. Man, Bear, North, South, walks.

Ans: White

91. A father has 7 penny's with him and 1 water melon is for 1p, 2chickoos for 1p, 3 grapes for 1p.he has three sons. How can he share the fruits equally?

Ans: 1 watermelon,2chickoos,1grape

92.  $(1/2)$  of a number is 3 times more than the  $(1/6)$  of the same number?

Ans: 9

93. There are two pipes A and B. If A filled 10 liters in hour B can fills 20 liters in same time. Likewise B can fill 10, 20, 40, 80,160....if B filled in  $(1/16)$  th of a tank in 3 hours, how much time will it take to fill completely?

Ans: 7 hours

94. KEYWORDS:T.Nagar,Chennai,1-100,prime numbers b/n 140-180,How many 2's are there?

Ans: 20 (Not only 2's ,1's,3's,4's,5's,6's,7's,8's,9's,0's also 20)

95. A man is standing before a painting of a man and he says I have no bro and sis and his father is my father's son?

Ans: he himself

96. One question has last part like difference between two terms is 9 and product of two numbers is 14, what is the squares of sum of numbers?

Ans: 109

97. What is the value of  $[(3x+8Y)/(x-2Y)]$ ; if  $x/2y=2$ ?

Ans:10 {the numerical may change}

98. A pizza shop made pizzas with to flavors in home there are 'N' different flavors, in that 'M' flavors are taken to made pizza. in how many ways they can arrange?

(Logic:  $NcM$  )

99. One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

Ans:15

100. One organization ,material labor and maintenance are in the ratio of 4:6:7,the material cost is:100,what is the total cost?

Ans: 425

101. KEYWORDS: density, reluctance, sensitivity, voltage ,current, what is the resistance  
Formula is “ $R=V/I$ ”

102. In a market 4 man are standing .the average age of the four before 4years is 45,aftyer some days one man is added and his age is 49.what is the average weight of all?

Ans: 49

103. KEYWORDS: Sports readers,10 tables,4chairs per table, each table has different number of people then how many tables will left without at least one person?

Ans: 6

107. KEYWORDS: Die, card, coin, b/n 2 to 12

Ans: All are equal

108. In a school for a student out of a 100 he got 74 of average for 7 subjects and he got 79 marks in 8th subject. what is the average of all the subjects?

Ans: 74.625

109. In a question ,last part has ,the ages of two people has the ratio of 6:6 and by adding the numbers we get 44,after how many years the ratio would be 8:7?

Ans: 8

110. One train travels 200m from A to B with 70 km/ph. and returns to A with 80kmph, what is the average of their speed?

111. Two years before Paul's age is 2times the Alice age and the present age of Paul is 6times the Alice. what is the presents Paul's age???( 3years) “u try to solve this question once”

112. There is Ferrari and Benz car, Benz speed is say 10kmph and it cover 10 km. & if Ferrari goes with 3 times faster than Benz. So in how much time Ferrari could take to cover same distance.

Sol: as speed of Ferrari is  $3*10=30$  so time will be  $10/30$

113. If one lady have 3 daughter and any of out 3 have diff, of ages is 3.And oldest is 3 times of more than 2 than youngest after 2 years then tell the age of oldest daughter.

Solution: let x is youngest ,y middle ,z oldest. so  $y-x=3$ ,  $z-y=3$ , and  $z=2(x+2)$  and put the option answer try to get condition (sorry i forgot option but pattern will be same)

114. One question like that ,there is Fibonacci series and you have to find one number ..clue-it based on series

116. if a person moves 15km straight and turns 45km right and moves 15km straight then how much distance he needs to walk to reach starting point?

117. if there are 30 cans out of them one is poisoned if a person tastes very little he will die within 14 hours so if there are mice to test and 24 hours, how many mice's are required to find the poisoned can? .if Atlantic is found in Atlantic ocean ,India is found in indian ocean then which of the following cases are true.

118.if a and b are mixed in 3:5 ration and b,c are mixed in 8:5 ration if the final mixture is 35 litres,find the amount {  $a/b=3*8/5*8$  and  $b/c=8*5/5*5$   
 $a/b/c=24:40:25$  Ans:  $40*35/(24+40+35)=1400/89=15.79$  }

119. $1!+2!+\dots+50!=3*10^64?$

120. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. hence the current average age has become 45. find the age of seventh person?

Solution: Here the question appear as an easy one, but carried a lot of unwanted sentences and unwanted datas(i dint mention above) in exam which may confuse u on solving technique.

Let x be current average age of first 6 persons in queue and current age of seventh person be y. Then  $6x$  will become the sum of those 6 persons age.

Now, let compute the sum of those 6 persons after two years,  $6x+12$  (as each and individual increase their age by 2). hence its average become  $(6x+12)/6 = 43$  (give in question itself).

So now we can compute x from above equation. ( $x = 41$ ,  $6x = 246$ )

Let now we compute y,  $((6x+y)/7) = 45$ , as we have value of x, compute y.

Ans: 69

121. Horse started to chase dog as it relieved stable two hrs ago. And horse started to ran with average speed 22km/hr, horse crossed 10 mts road and two small pounds with depth 3m, and it crossed two small street with 200 mts length. After traveling 6 hrs, 2hrs after sunset it got dog. compute the speed of dog?

Ans: As we have speed and travel time of horse, we can get distance traveled by it.

Hence  $d = 22*6 = 132$ km,

Exactly this 132km was traveled by dog in 8 hours (as it started two hours earlier).

Hence speed of dog =  $132/8 = 16.5$ km/hr

Ans: 16.5km/hr.

122. 3, 22 , 7, 45, 15, ?, 31

Solution: Here it appear simple, because it arranged in arranged in sequence manner, but the actual question was some what twist mentioning fibonacci series and more over question was in statements (no numbers).. hence first try to understand the question well.

here let group alternate terms  $3,7,15,31$  ( $3+4 =7$ ,  $7+8 =15$ ,  $15+16=31$ )

Similarly for second group  $(22,45,?)$  ( $22+23 = 45$ ,  $45+46 = 91$ ) hence

Ans: 91.

123. In Tnagar many buildings were under residential category. for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many time 6 will appear in building numbering?

Ans:

For 1 to 10 - 1 six

2 to 20 - 1 six

Similarly upto 59 we utilize six, 5 times

from 60 to 69 (including 66) - 11 times

from 70 to 100 - 3, hence ans =  $5+11+3 = 19$

Ans:19.

124. If we subtract a number with y, we get 4 increase of number, once it got divided by y itself.. Find that number??

Ans: 12 (we can easily predict from options, as we take y as 6)

125. I am only son for my parents. (some irrelevant statements in the middle to distract u). The man in picture is my father's son. (some irrelevant statements). who is he?

Ans: he himself (blood relation type of question).

126. It is the class with the seating arrangement in 4 rows and 8 columns. When the teacher says 'start' the girl who is sitting in first row and first column will say 1, then the next girl sitting behind her will say 4, the next girl sitting behind that girl will say 7, in a particular order each girl is telling a number, the following girls told 10, 13 next turn is yours what u will say?16

127. It is dark in my bedroom and I want to get two socks of the same color from my drawer, which contains 24 red and 24 blue socks. How many socks do I have to take from the drawer to get at least two socks of the same color?

- a) 2
- b) 3
- c) 48
- d) 25 ;

Solution: 3

128. Inspired by Fibonacci series sanket decided to create is own series which is 1,2,3,7,7,22,15,67,....

like this, then what no come immediately before 63?

Ans: 202

explanation ;check alternate no.1,3,7,15=====> $n^2+1$

similarly 2,7,22,67=====> $n^3+1$  so series is 1,2,3,7,7,22,15,67,31,202,63.

129. Valentine day 14 Feb. 2005,was celebrated by n and u on Monday, he was very happy, he n she then day on 14 Feb. 2010?

130. The cost 1 plum is 1 cent ,2 apples is 1 cent,3 banana is 1 cent if rahul buys same amount of fruits for his 3 sons spending 7 cent den what amount of fruit each child will get??

Ans: 1 plum ,2 apple,1 banana

xplanation: $7/3=2.333$  cents for each child

according to Ans given for d sum each child will get 1 plum ,2 apple,1 banana

131. There is a dice having value frm 1 ..6 on each face and a pack of cards having face card aces ....

(hugh chunk of nonsense).....when 2 dies are thrown and their scores are added then which sum will come max number of times??

1.8

2.9

3.10

4.11

Ans: 8

explanation : 8----2,6 3,5 4,4

9----4,5 3,6

10----5,5 4,6

11---- 5,6

thus 8's probability is more

132."susha brought terilon cloth and rope to if rope is 153 mtr long and it is to be cut into pieces of 1 mtr long then how many times will she have to cut it??

Ans: 152 times

133. (dnt remember the exact q but procedure was something like this) 8th year--1/1024,, 9th year--1/512,, 10th year--1/256 then aftr hw many years 1/32???

Ans: 13

134. There are 2 cans A and B one of MILK and other of Water resp. , both of same qty first one teaspoon of milk from A can was added to B can then one teaspoon from B can was added to A can then which of the following is true..

- 1.Can A contain more milk than water in can B
- 2.Can A contain less milk than water in can B
- 3.both contain same qty of milk and water

Ans: option--2

135. If a pipe can fill the tank within 6 hrs but due to leak it took 30 min more now if the tank was full hw much time will it take to get emptied through the leak ??

136. Avg wt of class is X kg (some number) after adding wt of the teacher avgas wt of class becomes Y kg then what is the wt of the teacher??

137. 20 men shake hand with each other. Maximum no of handshakes w without cyclic handshakes.

138. 100 men & women dance with each other. Probability that a man cannot dance with more than two women.

139. Horse chasing a pony. Horse leaves stable after 2hrs from ponies departure. 4 hrs 2 catch pony. Find speed of pony. Given-speed of horse.

140. A man goes north 37km.turns left goes 2km.turns right goes 17km.turns right goes 2km. find distance b/w starting&ending point.

141. Lady have 2 select gloves&hat from a basket I the dark. she can distinguish hat&gloves.14red,20blue,18green r there. Find probability that any selected glove pair has same color.

142. Alice in wonderland meets a character goblet whose age is 2times Alice after 2 years age problem

143. Peter is 2times Paul's age was when Peter's age is same as Paul's present age. find Paul's age.

144. From a rope a triangle is made of sides 21cm,24cm,28cm. from this a square is made. Find area of square.

145. In a supermarket average of 4people standing in queue taken 2yrs before is 55yrs. Now a person of 45 yrs is added current age.

146. A toy can produce 10diiff sounds. New toy is defective to produce 2 sounds in 3min. find probability that it produces 6 consecutive is 1 in(\_)

147. 1/6th of a no is 4 times more than 2/3 of a no. find
148. Age of 2 in d ratio 4:5. Total of 2 ages is 55. After 2 yrs age in ratio 5:7 ages
149. A jogger jogs@1/6th of his usual speed. How much % she has 2 increase 2 reach normal pace of walking.
- 150: X is 3 years younger to Y. X's father is a businessman who invested 10000/- at 8% rate of interest n obtained his amount after 10 years. Y's father is a job holder who invested around 20000 at 2% rate n obtained his amount after 20 years. Now Compounded both of them get around ABC rs/-(don't remember) After 5 years the ratio of ages of X n Y is 1:2. Now X's father is 20 years older to Y n Y' father is 30 years more than X. After 20 years again X's mother asks X's father to purchase a LCD TV which costs around 45000/-. what is the age of X n Y together?  
 Ans: answer lies in considering two statements 2gether i.e "X is 3 years younger to Y" n "After 5 years the ratio of ages of X n Y is 1:2"
- 

Q.1 There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40, 80, 160 in tank B. (At the end of first hour, B has 10 liters, second hour it has 20 liters and so on). If tank B is 1/32 filled of the 21 hours, what is total duration of hours required to fill it completely?

- a) 26
- b) 25
- c) 5
- d) 27

Solution: for every hour water in tank in B is doubled, Let the duration to fill the tank B is x hours.  $X/32$  part of water in tank of B is filled in 21 hours, Next hour it is doubled so,  $2*(x/32)$  part i.e  $(x/16)$  part is filled in 22 hours, Similarly  $(x/8)$  th part in 23 hours, $(x/4)$ th part is filled in 24 hours,  $(x/2)$  th part is filled in 25 hours,  $(x)$  th part is filled in 26 hours So answer is 26 hours.

Q.2: 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. Hence the current average age has become 45. Find the age of seventh person?

- a) 43 b) 69 c) 52 d) 31

solution Total age of 6 persons is  $x$  hours, after two years total age of 6 persons is  $x+12$  Average age of 6 persons is after two years is 43 So  $(x+12)/6=43$ , then solve  $x$ , After 7th person is added then  $(x+7\text{th person age})/7=45$  So we will get 7th person age easily

Q.3: A man travels from A to B at 4 mph over a certain journey and returns over the same route to A, at 5 mph. What is his average speed for the journey? Solution: Average speed= $(2*x*y)/(x+y)$

Q.4: A toy train produces 10 different sounds when it moves around a circular toy track of radius 5 m at 10 m per min. However, the toy train is defective and it now produces only 2 different tunes at random. What are the odds that the train produces for consecutive music tones of the same type?

- a) 1 in 16 B) 1 in 4 c) 1 in 8 d) 1 in 32

Solution: Initially it produces 10 sounds and the defect came and now it produces only 2 different sounds and consecutively so there are totally 2 sounds and we have to select on sound and the probability is  $\frac{1}{2}$  and it produces the same sound consecutively for 2 times so the probability becomes  $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

Q.5: A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he travelled 1 mile in north direction & reached at North Pole. There he saw a bear. He then followed the bear around 1 hr with a speed of 2 km/hr in east direction. After that he travelled in south direction & reached at his lab in 2 hrs. Then what is the color of the bear?

- a) White
- b) Black
- c) Gray
- d) Brown

Solution: White. all the above matter is nonsense.

Q.6: Usha bought a linen cloth and rope to build a tent. If the rope is 153 m long and it is to be cut into pieces of 1m length, then how many cuts are to be made to cut the ropes into 153 pieces?

- a) 153
- b) 152
- c) 154
- d) 155

Solution: To make it 153 pieces we have to cut 152 times so obviously after last cut we got 153rd piece

Q.7: 10 men and 10 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa?

- a) 22
- b) 20
- c) 10
- d) never

solution: NEVER

Q.8: 20 people are there, they are shaking hands together, how many hand shakes possible, if they are in no pair of cyclic sequence.

- a) 19
- b) 21
- c) 28
- d) 7

solution: answer is 19

For this type of problem answer will be  $n-1$ . but this formula will vary if cyclic sequence is allowed..

Q.9: there are some cycles and 4 wheeler cars. on tue there are 190 wheels. then how many cycles are there on that spot?

solution: check from options. multiply each and every option with 2 and subtract result from 190.if the obtained result is exactly divisible by 4, that will be the correct answer

Q.10: A father had three children. He had 7 pennies. how can he equally distribute the fruits among his children if A watermelon costs 1 penny, 2 oranges cost 1 penny and 3 grapes cost 1 penny  
a)2 melons, 1 orange, 1 grape b) 2 melons, 2 orange, 1 grape c) 1 melons, 2 orange, 1 grape.

solution: if he buys grapes with 1 penny, he can distribute 1grape each equally as there are 3 grapes. then he has 6pennies left with him so with 3pennies he will buy 6oranges and distribute 2each. with other 3 rupees he can buy 3watermelons and distribute one each therefore, answer is:1water melon, 2 oranges and 3 grapes

Q.11: The age of the two friends were in the ration of 6:5. If the sum of their ages is 55. Then after how many years their ratio will become 8:7?

- a) 11
- b) 7
- c) 10
- d) 12

Solution:  $6x+5x=55$ , so  $x=5$ , put first ratio after substitution is  $(6*5)/(5*5)$  and second ratio is  $40/35$  So difference in numerators  $40-30=10$  years

Q.12: A horse chases a pony 2 hours after the pony runs.Horse takes 3 hours to reach the pony.If the average speed of the horse is 81Kmph.Then what is the average speed of the pony?

- a) 46.4
- b) 51
- c) 53.4
- d) 48.6

Solution: Horse takes 3 hours to cover the distance Pony takes  $3+2 =5$  hours to cover the same distance, Velocity=distance/time, distance travelled by them is equal it is  $81*3=243\text{km}$ , speed of pony= $243/5=48.6$

Q.13: All 32 points are equidistant from a point X on a plane then which is true:

- a) all 32 lie on a circle
- b) distance from X to all 32 is less than distance between each other

Solution: option a

Q.13: Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout

its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan,s old Mercedes. If the speed of Mohan,s Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.

- a) 20.72
- b) 3.5
- c) 238.25
- d) 6.18

Solution: Speed of Ferrari = $4 \times 35 = 140$ , time=distance/velocity,

Q.14 A circular dartboard of radius 1 foot is at a distance of 20 feet from you. You throw a dart at it and it hits the dartboard at some point Q in the circle. What is the probability that Q is closer to the center of the circle than the periphery?

- a) 0.75
- b) 1
- c) 0.5
- d) 0.25

solution:

0.25

Q.15: For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A,s chances of winning. Let,s assume such rumors to be true and that in a match between Ghana and Bolivia,

Ghana the stronger team has a probability of  $2/3$  of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?

- a)  $4/9$
- b)  $2/3$
- c)  $1/9$
- d)  $5/9$

Answer is  $5/9$

Q.16 The citizens of planet nigiet are 8 fingered and have thus developed their decimal system in base 8. A certain street in nigiet contains 1000 (in base buildings numbered 1 to 1000. How many 3s are used in numbering these buildings?

- a) 256
- b) 54
- c) 192
- d) 64

Answer is 192

Q.17: 36 people {a<sub>1</sub>, a<sub>2</sub>, .., a<sub>36</sub>} meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs, {a<sub>1</sub>, a<sub>2</sub>}, {a<sub>2</sub>, a<sub>3</sub>}, {a<sub>35</sub>, a<sub>36</sub>}, {a<sub>36</sub>, a<sub>1</sub>}. Then size of the smallest set of people such that the rest have shaken hands with at least one person in the set is

- a)12
- b)13
- c)18
- d)11

Answer is 11

Q.18 Given 3 lines in the plane such that the points of intersection form a triangle with sides of length 20, 20 and 30, the number of points equidistant from all the 3 lines is:

- a) 4
- b) 3
- c) 0
- d) 1

answer is 4

Q.19: Alok and Bhanu play the following min-max game. Given the expression  $N=9+X+Y-Z$  where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be:

- a)27
- b)18
- c)20

answer is 20

Q.20 Alice has no winning strategy. 34 people attend a party. 4 men are single and the rest are there with their wives. There are no children in the party. In all 22 women are present. Then the number of married men at the party is

- a) 12
- b) 8
- c) 16

answer is 8

Q.No:21: Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line; i.e. the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The maximum value of  $n_1(P)$  over all configurations P of 19 points in the plane is

- a)18
- b) 9
- c) 3

Q.No:22 Alice and Bob play the following chip-off-the-table game. Given a pile of 58 chips, Alice first picks at least one chip but not all the chips. In subsequent turns, a player picks at least one chip but no more than the number picked on the previous turn by the opponent. The player to pick the last chip wins. Which of the following is true?

In order to win, Alice should pick 14 chips on her first turn.

In order to win, Alice should pick two chips on her first turn.

In order to win, Alice should pick one chip on her first turn.

I could not solve this

Q.No:23 After the typist writes 12 letters and addresses 12 envelopes, she inserts the letters randomly into the envelopes (1 letter per envelope). What is the probability that exactly 1 letter is inserted in an improper envelope?

- a) 0
- b) 12/212
- c) 11/12
- d) 1/12 (answer is 0.)

Q.No:24 10 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true? A. All suspects are lying or the leftmost suspect is innocent. B. All suspects are lying and the leftmost suspect is innocent .

- a) A only
- b) Neither A nor B
- c) Both A and B
- d) B only

(answer is A)

Q.No:25: Alchemy is an occult tradition that arose in the ancient Persian empire. Zosimos of Panopolis was an early alchemist. Zara, reads about Zosimos and decides to try some experiments. One day, she collects two buckets, the first containing one litre of ink and the second containing one litre of cola. Suppose she takes one cup of ink out of the first bucket and pours it into the second bucket. After mixing she takes one cup of the mixture from the second bucket and pours it back into the first bucket. Which one of the following statements holds now?

- a) There is more cola in the first bucket than ink in the second bucket.
- b) There is as much cola in the first bucket as there is ink in the second bucket.
- c) There is less cola in the first bucket than ink in the second bucket.

(answer is a)

Q.No:26: Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line; i.e. the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by  $n_1(P)$ . The maximum value of  $n_1(P)$  over all configurations P of 19 points in the plane is

- a) 18
- b) 9
- c) 3

I colud not solve this

Q.No:27: (1/2) of a number is 3 more than the (1/6) of the same number?

- a) 6
- b) 7
- c) 8
- d) 9

Solution: Let the number be x,  $((1/2)*x)=3+(1/6)*x$ , Then solve x

Q.No:28: 3 persons a,b,c were there A always says truth,B lies on Monday, tuesday,& Wednesday.but C lies on thursday, Friday & saturday .one day A said"that B & C said to A that" B said "yesterday way one of the days when I lies",C said that" yesterday way one of the days when I lies too".then which day was that?

- a) Sunday
- b) Thursday
- c) Saturday
- d) Tuesday

Q.No:29: Which is the smallest no which divides 2880 and gives a perfect square?

- a) 4
- b) 9
- c) 3
- d) 5

Q.No:30: 10 programmers, type 10 lines with in 10 minutes then 60lines can type within 60 minutes. How many programmers are needed?

- a) 16
- b) 6
- c) 10
- d) 60

Ans: 10

Q.No:31 to 33 2 to 3 questions of the same type above(q.29) were given like 12 monkeys eat 12 bananas in 12 min. then how many monkeys can eat 72 bananas in 72 min so on..

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#### I. Verbal Ability (32M)

[Synonyms (10M) + Antonyms (10M) + Two passages are there each carries 6M (2 X 6 = 12)]  
GRE Barron's is enough for this section

#### II. Quantitative & logical (38M)

Most of questions from previous papers but changed values, if you practice the questions twice or thrice before the exam it is easy to solve the questions in exam.

But don't try to remember the answers from previous papers. I will try to give some questions i remember. But not in order

1. Complete the series 26, 19, 17, 13, 11, -, 8, 7

Ans: 9

Sol: 26,17,11,8 these are decreasing like 9,6,3 19, 13, 9, 7 these are decreasing like 6, 4,2

2. Convert the decimal number 562 into base 7.

Ans: 1432

3. If QJFBTF is coded as PLEASE then HBJO can be coded as

Ans: GAIN

4. Find odd one?

- (a) SQL Server
- (b) Ingress
- (c) Oracle
- (d) DB2
- (e) JAVA

Ans: Java

5. Find odd one?

- (a) SMTP
- (b) ARP
- (c) WAP
- (d) HTTP
- (e) BAAN

Ans: BAAN because all protocols except BAAN

6. Which of the following is exact power of 4?

- (a) 4192
- (b) 2340
- (c) 4096

Ans: C

7. What is the largest prime number that can be stored in a 6 bit register?

Ans: 61 Sol:  $2^6 = 64$  (with in 64 largest prime no: 61)

8. Which will give good standard deviation?

- (a). 4,0,-4,0,4
- (b) 4,-4,4,-4,4
- (c) 4,4,4,4,4

9. Which shape will be obtained by using the following values for X and Y  
X 0 10 100 1000  
Y 9999 0.00001 1.02 1.72 3.00 4.72

Ans:  $Y = \log_{10}(X)$

10. What are the number of edges, number of vertices and number of faces of a planarcube among the following options?

- (a) 6, 6, 6

(b) 4,8,12

(c) 12, 8, 6

(d) 4,6,12

Ans: C

11. What is the value of the following expression  $M(373,5)+T(7.7)+R(4.4)-T(3.6)$  Where M- MODULAS R- ROUND OFF T- TRUNCATE

Ans: 11

Sol:  $3 + 7 + 4 - 3 = 11$

12. What is the value of the expression % # % (6) + # % # (6) Where % means DOUBLING and # means RECIPROCAL

13. Match the following (this type of question but not same) A B

1. Mammal, cow —> a. A type of

2. Snake reptile —> b. A part of

3. Roof – Building —> c. Not a type of

4. Mushroom – Vegetables —> d. A superset of

Ans: 1-d, 2-c, 3-b, 4-a

14. If  $G(0) = -1$   $G(1) = 1$  and  $G(N) = G(N-1) - G(N-2)$  then what is the value of  $G(6)$ ?

Ans: -3

Sol:  $g(2) = g(1) - g(0) = 1 - (-1) = 2$ , similarly  $g(3), \dots, g(6)$ ;

15. If  $A = 0\ 0\ 0\ 0\ 1\ 1\ 1\ 1$   $B = 0\ 0\ 1\ 1\ 0\ 0\ 1\ 1$   $C = 0\ 1\ 0\ 1\ 0\ 1\ 0\ 1$  Then find the value of [A U C] U B and express it in decimal.

Ans: 151

16. If A, B, C are the mechanisms used separately to reduce the wastage of fuel by 30%, 40%, 10%. What will be the fuel economy if they were used combine?

(A).68.4

(B) 62.2

(C).58

(D).27

Ans: 62.2

Sol:  $(70/100) * (60/100) * (90/100) * 100 = 37.8$  Eco =  $(100 - 37.8) = 62.2$

17. Which of the following straight lines are perpendicular to each other?

- $2x+y=8$
- $x=4$

- $y=6$
- $2y=x+3$

- (a) 1, 3  
 (b) 2, 3  
 (c) 1, 4  
 (d) 3, 4  
 (e) None

18. In Madras , temperature at noon varies according to  $t^2/2 + 4t + 12$  (Read is as:  $t^2/2 + 4t + 12$ ), where  $t$  is elapsed time. Find how much percentage of temperature is increased (or decreased) between 5pm and 8pm. (HINT: substitute&subtract values from 5 to 8)

19. The size of a program is  $N$ . And the memory occupied by the program is given by  $M = \sqrt{100N}$ . If the size of the program is increased by 1% then how much more memory is required now?

- (a) 1.0%  
 (b) 2.6%  
 (c) 0.5%  
 (d) 1.4%  
 (e) 2.7%

20. A power unit is there by the bank of a river of 900 meters. A cable is made from power unit to power a plant opposite to that of the river of 2000mts. The cost of the cable below water is Rs. 5/- per meter and cost of cable on the bank is Rs. 4/- per meter. Then find out the amount to be invested to connect those two stations.

Ans: 8500)

Sol:  $900 \times 5 = 4500 + 1100 \times 4 = 4400 \Rightarrow 8500$

21. A can copy 50 papers in 10 hours while both A & B can copy 70 papers in 10 hours.

Then how many hours required for B to copy 26 papers?

Ans: 13

22. A sequence of letters is given. We've to find out how many V's are there under the condition that, S should be followed by V and should not be followed by F.....

V,S,F,T,W,E,L,B,V,S,L,L,K,S,M,S,V,F,L,S,D,I,..... Like that.

23. In a two-dimensional array, X (7, 9), with each element occupying 8 bytes of memory, with the address of the first element X (1, 1)=3000; find the starting address of the element at X (5,8).

Ans: 3172

Sol:  $(4 \times 9) + 7 = 43 \times 4 = 172 \Rightarrow 3000 + 172 = 3172$  ( i.e completely 4 rows r filled , in fifth row up 7th cell is filled next cell is required address )

24. In the word ORGANISATIONAL, if the first and second, third and forth, fifth and sixth, etc words are interchanged, what would be the 12th letter from right?

Ans: 'A'

25. A Flight takes off at 4 A.M from North-East direction and travels for 7 hours to reach the destination in the North-West direction. Some latitude and longitude of source and destination given. Find the local arrival time of destination? (I don't know how to find it)

26. Four 2X2 matrices were given. We've to find out which of them is a singular matrix?

Hint: try for which matrix  $\det(A)$  becomes zero ( $ad - bc$ ).

27.  $(\text{Momentum}^* \text{Velocity}) / (\text{Acceleration}^* \text{distance})$

(a) Newton

(b) Mass

(c) Force

29. Based on a Venn diagram. 3 problems were given. All are so easy. No need to worry.

(Once go through R.S AGGARWAL)

30. A bar chart was been given. Two questions based on this. Easy ones. Don't fear.

(Once go through R.S AGGARWAL)

31. One question on curves.(iam not remembering please go through previous papers)

### III. Critical reasoning (12M)

In critical section there are three passages, each passage carries 4 marks.

Passage one: A group of 5 people A, B, C, D, and E are there.

- A knows Telugu and Hindi.
- B knows Oriya and Malayalam
- C knows Telugu and Malayalam
- D knows English and Oriya.
- E knows Telugu and Oriya

With the above conditions four questions are given.

Passage two: Small University and Large University problem of GRE Barron's 13th edition. This can be found in the model papers.

## Questions from placement cell

### Aptitude section

1)In a well of 20feet depth, a frog jumps 5feet up in the morning and comes 4feet down in the evening, on which day the frog gets out of the well.

2)Next number in the series:77,49,36,18,?

answer 8

$(7*7=49)(4*9=36)(3*6=18) (1*8=8)$

3)A & B are playing a game .There are 8 oranges in a row on the table.one Player can take 1-4 oranges in a pick (a maximum of 4),one who picks the last orange wins the game.'A' plays first  
How many oranges should he pick first time inorder to win the game.

answer 3.

4) $9/10$  or  $10/11$  which is greater.

5)  $(x-y/3)-(y-x/3)=?$

6) $x:y=3$  and  $x+y=80$  what is the value of  $y$ ?

answer  $y=20$

7)Average of 5 number is -10 sum of 3 numbers is 16,what is the average of other two numbers?

answer -33

8)16 litre can, 7 litre can, 3 litre can, the customer has to be given 11 litres of milk using all the three cans only explain?

9)A car has run 10000 miles using 5 tyres interchangably, To have equal wornout by all tyres how many miles each tyre should have run.

answer 4000 miles/tyre

10) 8 to the power of x is 32, what is the value of x?

11) 12 Blacksox and 12 Whitesox mixed in a box, a pair of sox is picked at a time, in which pick/ how many pick, to get the right pair (black&black or white&white)?

12) Two coins one with HEAD IN BOTH SIDES and the other coin HEAD IN ONE SIDE AND TAIL IN THE OTHER SIDE is in a box, a coin is taken at random and FOUND HEAD IN ONE SIDE .. what is the probability that THE OTHER SIDE IS HEAD?

13) A man shapes 3 cardboards in 50 minutes, how many cardboards does he shape in 5 hours?  
answer 18 cardboards.

14) How many 3 digits with 3 Distinct digits are there from 100-1000.

15) Three men goes to a hotel to stay, the clerk says \$30 per room/day so all the three plans to stay in one room so each pays \$10. After some time the clerk realises that he made a mistake of collecting \$30 but the room cost only \$25, therefore he decides to return \$5 to them so he calls the room boy and gives him \$5 asking him to return. The room boy keeps \$2 with him and he returns only \$3 (\$1 for each). Now Totally all have paid \$9 each (\$27) + room boy \$2 which is equal to \$27. where did \$1 go, who has made the mistake?

1. In a two-dimensional array, X (9, 7), with each element occupying 4 bytes of memory, with the address of the first element X (1, 1) is 3000, find the address of X (8, 5).

ANS: 3212

2. In the word ORGANISATIONAL, if the first and second, third and forth, forth and fifth, fifth and sixth words are interchanged up to the last letter, what would be the tenth letter from right?

ANS: I(ROANISATIONALLG)

2E. In the word ORGANISATIONAL, if the first and second, third and forth, fifth and sixth words are interchanged up to the last letter, what would be the tenth letter from right?

ANS: I(ROAGINASITNOLA)

3. What is the largest prime number that can be stored in an 8-bit memory?

ANS:127

4. Select the odd one out. a. Java b. Lisp c. Smalltalk d.Eiffel.

ANS: LISP

5. Select the odd one out a. SMTP b. WAP c. SAP d. ARP

ANS: SAP

6. Select the odd one out a. Oracle b. Linux c. Ingress d. DB2

ANS:LINUX

7. Select the odd one out a. WAP b. HTTP c. BAAN d. ARP

ANS:BAAN

8. Select the odd one out a. LINUX b. UNIX c.SOLARIS d. SQL SERVER

ANS:SQL SERVER

9. Select the odd one out a. SQL b. DB2 c.SYBASE d. HTTP

ANS:HTTP

10. The size of a program is N. And the memory occupied by the program is given by  $M = \sqrt{100N}$ . If the size of the program is increased by 1% then how much memory now occupied?

11. A man, a woman, and a child can do a piece of work in 6 days. Man only can do it in 24 days. Woman can do it in 16 days and in how many days child can do the same work?

ANS:16

12. In which of the system, decimal number 194 is equal to 1234?

ANS:5

13. Find the value of the 678 to the base 7.

ANS:1656

14. Number of faces, vertices and edges of a cube

ANS:6,8,12

15. Complete the series 2, 7, 24, 77,\_\_\_

ANS:238

16. Find the value of @@+25-++@1..., where @ denotes "square" and + denotes "square root".

ANS:121

17. Find the result of the following \_expression if, M denotes modulus operation, R denotes round-off, T denotes truncation:

M(373,5)+R(3.4)+T(7.7)+R(5.8) ANS:19

18. If TAFJHH is coded as RBEKGI then RBDJK can be coded as -----

ANS:PCCKJ

19. G(0)=-1, G(1)=1, G(N)=G(N-1) - G(N-2), G(5)= ?

ANS:-2

20. What is the max possible 3 digit prime number?

ANS:

21. A power unit is there by the bank of the river of 750 meters width. A cable is made from power unit to power a plant opposite to that of the river and 1500mts away from the power unit. The cost of the

cable below water is Rs. 15/- per meter and cost of cable on the bank is Rs.12/- per meter. Find the total of laying the cable.

ANS:20250

22. The size of a program is N. And the memory occupied by the program is given by  $M = \sqrt{100N}$ . If the size of the program is increased by 1% then how much memory now occupied?

23. In Madras, temperature at noon varies according to  $-t^2/2 + 8t + 3$ , where t is elapsed time. Find how much temperature more or less in 4pm to 9pm.

ANS: 385.8(DB)

24. The size of the bucket is N kb. The bucket fills at the rate of 0.1 kb per millisecond. A programmer sends a program to receiver. There it waits for 10 milliseconds. And response will be back to programmer in 20 milliseconds. How much time the program takes to get a response back to the programmer, after it is sent?

ANS: 30MILISECOND

25. A man, a woman, and a child can do a piece of work in 6 days. Man only can do it in 24 days. Woman can do it in 16 days and in how many days child can do the same work?

26. If the vertex (5,7) is placed in the memory. First vertex (1,1) ?s address is 1245 and then address of (5,7) is -----

27. Which of the following are orthogonal pairs?

- a.  $3i+2j$
- b.  $i+j$
- c.  $2i-3j$
- d.  $-7i+j$

ANS: (A)& (C).

28. If VXUPLVH is written as SURMISE, what is SHDVD?

ANS: PEASA

29. If A, B and C are the mechanisms used separately to reduce the wastage of fuel by 30%, 20% and 10%. What will be the fuel economy if they were used combined.

ANS: 20%

30. What is the power of 2? a. 2068 b.2048 c.2668

ANS: (B). 2048

31. Complete the series. 3, 8, --, 24, --, 48, 63

ANS: 15,35

32. Complete the series. 4, -5, 11, -14, 22, ---

ANS: -27

33. A, B and C are 8 bit no?s. They are as follows:

A 1 1 0 1 1 0 1 1

B 0 1 1 1 1 0 1 0

C 0 1 1 0 1 1 0 1

Find  $(A - B) \cup C = ?$

Hint :

$A - B$  is  $\{A\} - \{A \cap B\}$

ANS: 0 1 1 1 1 1 1 1 (DB)

A Flight takes off at 2 A.M from northeast direction and travels for 11 hours to reach the destination which is in north west direction. Given the latitude and longitude of source and destination. Find the

local time of destination when the flight reaches there?

ANS: 1:00 P.M

35. A can copy 50 papers in 10 hours while both A & B can copy 70 papers in 10 hours. Then for how many hours required for B to copy 26 papers?

ANS: 13

36. A is twice efficient than B. A and B can both work together to complete a work in 7 days.

Then find in how many days A alone can complete the work?

ANS: 10.5 DAYS(11)

37. A finish the work in 10 days. B is 60% efficient than A. So how many days does B take to finish the work? ANS : 4 DAYS.

38. A finishes the work in 10 days & B in 8 days individually. If A works for only 6 days then how many days should B work to complete A's work?

ANS : 3.2 DAYS(4)

39. Given the length of the 3 sides of a triangle. Find the one that is impossible? (HINT : sum of smaller 2 sides is greater than the other one which is larger)

40. Find the singularity matrix from a given set of matrices? (Hint  $\det(A) == 0$ )

41. A 2D array is declared as  $A[9,7]$  and each element requires 2 byte. If  $A[1,1]$  is stored in 3000. Find the memory of  $A[8,5]$  ?

ANS: 3106.

42. Sum of slopes of 2 perpendicular st. lines is given. Find the pair of lines from the given set of options which satisfy the above condition?

43. (a)  $2+3i$  (b)  $1+i$  (c)  $3-2i$  (d)  $1-7i$ . Find

which of the above is orthogonal.

ANS : (A) & (C).

44. (Momentum\*Velocity)/(Acceleration \* distance ) find units.

ANS:MASS

45. The number 362 in decimal system is given by  $(1362)_x$  in the X system of numbers find the value of X a)5 b) 6 c) 7 d) 8 e) 9

46. Given \$ means Tripling and % means change of sign then find the value of \$\$\\$6\%\\$6

ANS : -72

47. My flight takes off at 2am from a place at 18N 10E and landed 10 Hrs later at a place with coordinates 36N70W. What is the local time when my plane landed.

a) 6:00 am b) 6:40am c)7:40 d)7:00 e)8:00 (Hint : Every 1 deg

longitude is equal to 4 minutes . If west to east add time else subtract time)

ANS: (E) 8:00

48. Find the highest prime number that can be stored in an 8bit computer.

49. Which of the following set of numbers has the highest Standard deviation?

1,0,1,0,1,0

-1,-1,-1,-1,-1,-1

1,1,1,1,1,1

1,1,0,-1,0,-1

50. Match the following:

1. Male - Boy --->

a. A type of

2. Square - Polygon --->

b. A part of

3. Roof - Building --->

c. Not a

type of

4. Mushroom - Vegetables ---> d.

A superset of

Ans: 1- d, 2- a, 3- b, 4- c

51. Match the following.

1. brother - sister

---> a. Part of

2. Alsatian - dog --->

b. Sibling

3. sentence - paragraph --->

c. Type of

4. car - steering

---> d. Not a type

of

Ans. 1-b, 2-c, 3-a, 4-d

## QUESTIONS FROM STUDENTS

1. Questions during Aptitude Test
2. Sequence completion---→32      34      56      58      60      \_\_\_\_\_
3.  $x+y=2$ ,  $xy=1$ ,       $x-y=?$
4. There are 2 containers with red and white balls probability of getting red from both
5. In some country people have 8 fingers . In their binary system how many 2's will be there in 1 to 100.
6.  $xy+y=2$ ,       $x/y=1$ ,       $x=?$

---

7. Hare and turtle questions
8. Shaking hands questions of people standing in a circle
9. Ferrari and Benz car questions
10. Ashok and bhanu questions
11. Missing number in the sequence
12. Questions on ages
13. Questions arrangements of coin bags
14. Questions on trains

---

15. Simple questions in train problems. Time and distance problems
16. Ratios and shares. The combination of CI & SI
17. Probabilities
18. Ages and ratios of ages
19. Expression equation about  $e^{(2,3)}+e^{(x,5)}=5$

---

20. Problems on permutations/Combinations/Probability
21. Problems on partnership/ratios
22. Problems on equations/time & distance
23. Simple interest(basics)
24. Percentages/profit loss
25. Circular arrangement
26. Speed distance problems
27. Series computation

---

28. Problems on arithmetic, simple mathematics
29. Probabilities, questions on A.P & G.P.

30. Permutations
31. Questions on clock , calendar , partnerships
32. Logical questions
33. Age related questions
- 
34. Hare and tortoise problems
35. Profit & loss
36. Problems on ages
37. Trains
38. Partnership problems
39. To find one poisoned drum by using mice
40. Calendar
41. Speed ,distance & time
- 
42. 70 patterns from previous year TCS
43. Patterns told by productivity reach
44. Refer 70 patterns on the internet
- 
45. Develop your communications skills
46. How to interact with people be confident in inanswering th question .. wether you are right or wrong
47. Your communication itself matters to get in or not
- 
48. If  $\frac{1}{4}$  th of a tank takes 15min how much time will it take to fill the tank completely? A)20 b)18 C)  
17 d) 19
- 
49. 5,15,--,51,53,106 find missing number
- 
50. Distance & speed
51. Permutations & combinations
52. Probability
53. Logical thinking
54. Profit,loss,distance,discount
55. Geometric series
56. Areas
57. Cuboids
- 
58. Probability
- 
59. Permutations & combinations

- 60. Ratios & proportions
- 61. Percentage
- 62. Heights & distance
- 63. Statements (True/False)
- 64. Questions on permutations
- 65. Hare-tortoise problems
- 66. Mice-poisonous based problems
- 67. Age problems
- 68. Probability problems
- 69. Dart board problems
- 70. Statements (true/false)
- 71. Stack problems

---

72. Logical series questions like what comes next

- 73. Problems related to cubes, ages
- 74. Mensuration problems, averages
- 75. Relationships, P & C. circular 7 linear permutations
- 76. Probability

---

77. Permutations & combinations

- 78. Time problems
- 79.  $X+y-z=11$  problems
- 80. Mice problems

---

81. Mice problems

- 82. Hare tortoise problems
- 83. Permutations & combinations\
- 84.  $X+y-z=11$  problem
- 85. A.P problem

---

86. Productivity reach material

87. 70 patterns of TCS

---

## 88. Old papers of TCS

---

- 89. Questions on probability,
  - 90. Questions number systems,
  - 91. Questions A.P. & G.P,
  - 92. Questions time & Distance,
  - 93. Questions Speed,
  - 94. Questions Work
- 

- 95. Problems on probability
  - 96. Problems on permutations
  - 97. Number systems
  - 98. A.P,G.P,H.P
  - 99. Time, distance, speed
  - 100. Work & time.
- 

- 101. Hare &turtle questions
  - 102. Shaking hand questions of people standing in a circle
  - 103. Angle between the hands of a clock on another planet having different time lines
  - 104. Probability questions
  - 105. Win questions (gold coin) among a set of coins
  - 106. Ferreri & benz car question with relative speeds
  - 107. Cubes problem pain.....
  - 108. Tanj fillings simultaneously doubling every hour
- 

- 109. Hare &turtle questions
  - 110. Mice problems
  - 111. Series problems? Fill the numbers
  - 112. Problems on permutations & combinations
  - 113. Ages problems
  - 114. Dot board problems
  - 115. Probability problems
  - 116. Statements tru/false? Statements problems
- 

- 117. Shaking hands of set of people in a circular path
- 118. Clock time based questions
- 119. Questions of on distance, speed & time
- 120. Problems on ages

- 
- 121. Questions based on simultaneous equations
  - 122. Blood relations test
  - 123. Problems on calendar
- 
- 124. Tell about your self
  - 125. Zener voltage regulator and zener diode
  - 126. Oppose anna hazzare. On witch point you
  - 127. Permutations
  - 128. Time speed distance questions
  - 129. Relationships
  - 130. Paragraph questions
- 
- 131. How many participants were there if 8 rounds were conducted to select a winner if in each round half of the people got eliminated
- 
- 132. Time speed distance questions
  - 133. Work and power related questions
  - 134. Ages and compound interest
  - 135. Permutation and combinations
  - 136. Probability
  - 137. Train lengths distance coverd and time
  - 138. Pipes and cisterns
  - 139. Ratios and proportions
  - 140. Sequences and series
  - 141. Antonyms and synonyms
  - 142. Word analogy
  - 143. Paragraph comprehension
- 
- 144. Cubes
  - 145. Percentages
  - 146. Simple & compound interest
- 
- 147. First of all, before going to aptitude round we should be able to go through all previous papers which are available on interest
  - 148. I have gone through sites like [www.placementpapers.net](http://www.placementpapers.net)
  - 149. I notice that out of 35 questions 20 questions I observed already in the previous practice papers some of them
- 
- 150. A tank has inflow by pipe A such that it for 1<sup>st</sup> hour 20ltrs, 2<sup>nd</sup> hour 40ltrs so on. At present tank is at 1/8 of its capacity. Find the time taken to completely fill the tank

151. Cost price-43000 then he sold for profit of 10% then he bought same thing for discount of 20% then find the price at which he bought.
- 
152. A takes 6 days to complete a work , B alone takes 4 days to complete the work. How much time does the both together take to complete the same work.
153. A coin and die are tossed. What is the probability of getting a head & 6 on die.
154. On a planet other than earth at which one day =24hours, 1Hr=90 min. , 1min=60sec. now the time is 12:40 on earth what is time on that planet.
155. A police chases a thief who starts 10min earlier. The thief travels at a speed of 10km per hr in a mock and at 60Km per hr at rest. The speed of police is 90km/hr. at what time(or distance) do they meet.
156. Father says to his son my age is 10 times your age when you born and your mother is 10 greater to your sister.....
- 
157. A can fill the tank in 32 hrs. B can fill it in 24hrs. what is the time taken to fill the tank completely if both A & B are open.
158. Heir & tortoise if heir completes  $\frac{1}{5}$  th part of a circle, tortoise completes  $\frac{1}{8}^{\text{th}}$  the distance after which they meet.
- 
159. Profit & loss percentage
- 
160. Calendar problems.
161. Simple interest problems
162. Pipes problems
163. Permutation & combinations problems
164. Speed problems
165. Percentage problems
- 
166. Permutation & combinations problems
167. Speed & distance problems
168. Problems based on age of a person
169. Logical thinking questions
170. Discount, profit, loss problems
171. Arithmetic series, geometric series
172. Probability problems
173. Problems on clock
- 
174. Percentages
175. Profit & loss
176. Problems on ages

177. Allegations & mixtures
178. Simple interest
179. Compound interest
180. Probability
181. Permutations & combinations
- 
182. The questions which are discussed in the productivity reach-campus recruitment training
183. All the questions similar to the discussed patterns of CRT
- 
184. Problems based on speed distance and time
185. Circular and linear hand shakes
186. Clock problems
187. All the 70 patterns of TCS
- 
188. A tortoise started in a race of diameter 100yards. Heir started after  $1/5^{\text{th}}$  of distance is covered by tortoise they both met at a distance of  $1/8^{\text{th}}$ . If the race is to get tie by what factor have should increase its speed. (a)12                         (b)14                         (c)37.5                     (d)42
189. A thief is running out in a car after bank robbery and as it is a busy city. He travelled at 10km/hr for an hour and then went on to a highway. Police started 4hrs later and caught him after 7hrs of chase with speed of 70km/hr. what is the speed of thief on highway.
190. If n,m are two variable and if those variables are integers it is given by  $\log_5^n = 4xm$ . Then which of these satisfy for n
- a. (a)625                     (b)325                     (c)5                             (d)10
191. Sequence      5,15,17,---,53,151,153
- 
192. There were 126 barrels of liquid poison is poured in to one hard. A rat takes 14 hours to detect a poison from each barrel. If there is only 24hr time, how many rats are used to find the poisoned barrel?
193. The probability if a person guesses is zero. Then what is the probability if person has to pick one number from two numbers
194. There was a circular race between tortoise & rabbit. The rabbit starts the race after the tortoise has finished  $1/3$  race. Tortoise speed is to of rabbit. Now, how much speed rabbit has to increase
195. There are 10 red balls and 10 green balls. If a ball has to be picked random. What is the probability that max is red ball
196. A woman contain 6 blue socks 14 red socks 9green socks , if woman has to pick socks blindly. In how many ways should the woman has to pick such that it contains all color pair of socks.
-

197. If  $\frac{1}{4}$ th of a tank takes 15min, how much time will it take to fill the tank completely a)20  
b)18 c)17 d) 19
198. 5,15,--,51,53,106 find missing number
- 
199. Heir & tortoise race. Heir completed  $\frac{1}{5}$ th of track then tortoise started race. Certain time lags are given. Find avg speed/speed of tortoise
200. Size of coin in a country should be  $\frac{3}{2}$  times of initial one. Range 60-520. How many coins can be designed.
201. Rats. How many rats are required to test the poisoned one. Times are given for each pot of test 20min are required for rat to die if, if poison is feed
202. Finding the avg speeds
- 
203. If  $\frac{1}{16}$ th of tank is filled in 15min, how much time will it take to fill the tank completely
204. If there were 8 rounds of different matches are played in each round such that half the number are eliminated in each round. Find the no of matches played
-

**Technical interview  
PREVIOUS QUESTION PAPERS**

1. A 2MB PCM(pulse code modulation) has
  - a) 32 channels
  - b) 30 voice channels & 1 signalling channel.
  - c) 31 voice channels & 1 signalling channel.
  - d) 32 channels out of which 30 voice channels, 1 signalling channel, & 1 Synchronization channel.

Ans: (c)

2. Time taken for 1 satellite hop in voice communication is

- a) 1/2 second
- b) 1 seconds
- c) 4 seconds
- d) 2 seconds

Ans: (a)

3. Max number of satellite hops allowed in voice communication is :

- a) only one
- b) more than one
- c) two hops
- d) four hops

Ans: (c)

4. What is the max. decimal number that can be accommodated in a byte.

- a) 128
- b) 256
- c) 255
- d) 512

Ans: (c)

5. Conditional results after execution of an instruction in a micro processor is stored in

- a) register
- b) accumulator
- c) flag register
- d) flag register part of PSW(Program Status Word)

Ans: (d)

6. Frequency at which VOICE is sampled is

- a) 4 Khz
- b) 8 Khz
- c) 16 Khz
- d) 64 Khz

Ans: (a)

7. Line of Sight is

- a) Straight Line
- b) Parabolic
- c) Tx & Rx should be visible to each other
- d) none

Ans: (c)

8. Purpose of PC(Program Counter) in a MicroProcessor is

- a) To store address of TOS(Top Of Stack)
- b) To store address of next instruction to be executed.
- c) count the number of instructions.
- d) to store base address of the stack.

Ans: (b)

9. What action is taken when the processor under execution is interrupted by a non-maskable interrupt?

- a) Processor serves the interrupt request after completing the execution of the current instruction.
- b) Processor serves the interrupt request after completing the current task.
- c) Processor serves the interrupt request immediately.
- d) Processor serving the interrupt request depends upon the priority of the current task under execution.

Ans: (a)

10. The status of the Kernel is

- a) task
- b) process
- c) not defined.
- d) none of the above.

Ans: (b)

11. To send a data packet using datagram , connection will be established

- a) before data transmission.
- b) connection is not established before data transmission.
- c) no connection is required.
- d) none of the above.

Ans: (c)

12. Word alignment is

- a) aligning the address to the next word boundary of the machine.
- b) aligning to even boundary.
- c) aligning to word boundary.
- d) none of the above.

Ans: (a)

13 When a 'C' function call is made, the order in which parameters passed to the function are pushed into the stack is

- a) left to right
- b) right to left
- c) bigger variables are moved first than the smaller variables.
- d) smaller variables are moved first than the bigger ones.
- e) none of the above.

Ans: (b)

14 What is the type of signalling used between two exchanges?

- a) inband
- b) common channel signalling
- c) any of the above
- d) none of the above.

Ans: (a)

15 Buffering is

- a) the process of temporarily storing the data to allow for small variation in device speeds
- b) a method to reduce cross talks
- c) storage of data within transmitting medium until the receiver is ready to receive.
- d) a method to reduce routing overhead.

Ans: (a)

16. Memory allocation of variables declared in a program is

- a) allocated in RAM.
- b) allocated in ROM.
- c) allocated on stack.
- d) assigned to registers.

Ans: (c)

17. A software that allows a personal computer to pretend as a computer terminal is

- a) terminal adapter
- b) bulletin board
- c) modem
- d) terminal emulation

Ans: (d)

18. Find the output of the following program

```
int *p,*q;  
p=(int *)1000;  
q=(int *)2000;  
printf("%d",q-p);
```

Ans: 500

19. Which addressing mode is used in the following statements:

- (a) MVI B,55
- (b) MOV B,A
- (c) MOV M,A

Ans. (a) Immediate addressing mode.

(b) Register Addressing Mode

(c) Direct addressing mode

20. RS-232C standard is used in \_\_\_\_\_.

Ans. Serial I/O

21. Memory Management in Operating Systems is done by

- a) Memory Management Unit
- b) Memory management software of the Operating System
- c) Kernel

Ans: (b)

22. What is done for a Push operation?

Ans: SP is decremented and then the value is stored.

23. Binary equivalent of 52

Ans. 110100

24. Hexadecimal equivalent of 3452

Ans. 72A

25. Explain Just In Time Concept ?

Ans. Elimination of waste by purchasing manufacturing exactly when needed

26. A good way of unit testing s/w program is

Ans. User test

27. OOT uses

Ans. Encapsulated of detect methods

28. EDI useful in

Ans. Electronic Transmission

29. MRPII different from MRP

Ans. Modular version of man redundant initials

30. Hard disk time for R/W head to move to correct sector

Ans. Latency Time

31. The percentage of times a page number bound in associate register is called

Ans. Bit ratio

32. Expand MODEM

Ans. Modulator and Demodulator

33. RDBMS file system can be defined as

Ans. Interrelated

34. Super Key is

Ans. Primary key and Attribute

35. Windows 95 supports

- (a) Multiuser
- (b) n tasks
- (c) Both
- (d) None

Ans. (a)

36.In the command scanf, h is used for

Ans. Short int

37.A process is defined as

Ans. Program in execution

38.A thread is

Ans. Detachable unit of executable code)

39.What is the advantage of Win NT over Win 95

Ans. Robust and secure

40.How is memory management done in Win95

Ans. Through paging and segmentation

41.What is meant by polymorphism

Ans. Redfinition of a base class method in a derived class

42.What is the essential feature of inheritance

Ans. All properties of existing class are derived

43.What does the protocol FTP do

Ans. Transfer a file b/w stations with user authentication

44.In the transport layer ,TCP is what type of protocol

Ans. Connection oriented

45.Why is a gateway used

Ans. To connect incompatible networks

46.How is linked list implemented

Ans. By referential structures

47.What method is used in Win95 in multitasking

Ans. Non preemptive check

48.What is a semaphore

Ans. A method synchronization of multiple processes

49.What is the precedence order from high to low ,of the symbols ( ) ++ /

Ans.( ), ++, /

50.Preorder of A\*(B+C)/D-G

Ans.\*+ABC/-DG

1. The C language terminator is

- (a) semicolon
- (b) colon
- (c) period
- (d) exclamation mark

2. What is false about the following -- A compound statement is

- (a) A set of simple statements
- (b) Demarcated on either side by curly brackets
- (c) Can be used in place of simple statement
- (d) A C function is not a compound statement.

3. What is true about the following C Functions

- (a) Need not return any value
- (b) Should always return an integer

- (c) Should always return a float
- (d) Should always return more than one value

4. Main must be written as

- (a) The first function in the program
- (b) Second function in the program
- (c) Last function in the program
- (d) Any where in the program

5. Which of the following about automatic variables within a function is correct ?

- (a) Its type must be declared before using the variable
- (b) They are local
- (c) They are not initialised to zero
- (d) They are global

6. Write one statement equivalent to the following two statements

```
x=sqr(a);  
return(x);
```

Choose from one of the alternatives

- (a) return(sqr(a));
- (b) printf("sqr(a)");
- (c) return(a\*a\*a);
- (d) printf("%d",sqr(a));

7. Which of the following about the C comments is incorrect ?

- (a) Comments can go over multiple lines
- (b) Comments can start anywhere in the line
- (c) A line can contain comments without any language statements
- (d) Comments can occur within comments

8. What is the value of y in the following code?

```
x=7;  
y=0;  
if(x=6) y=7;  
else y=1;  
(a) 7  
(b) 0  
(c) 1  
(d) 6
```

9. Read the function conv() given below

```
conv(int t){  
int u;  
u=5/9 * (t-32);  
return(u);
```

}

What is returned

- (a) 15
- (b) 0
- (c) 16.1
- (d) 29

10. Which of the following represents true statement either x is in the range of 10 and 50 or y is zero

- (a)  $x \geq 10 \ \&\& \ x \leq 50 \ || \ y == 0$
- (b)  $x < 50$
- (c)  $y != 10 \ \&\& \ x \geq 50$
- (d) None of these

11. Which of the following is not an infinite loop ?

- (a) `while(1){ ....}`
- (b) `for(;;)`  
{  
...  
}
- (c) `x=0;`  
`do{`  
`/*x unaltered within the loop*/`  
`.....}`  
`while(x == 0);`
- (d) `# define TRUE 0`  
...  
`while(TRUE){`  
`.....}`

12. What does the following function print?

```
func(int i)
{ if(i%2) return 0;
else return 1;}
main()
{
int =3;
i=func(i);
i=func(i);
printf("%d",i);
}
```

- (a) 3
- (b) 1
- (c) 0
- (d) 2

13. How does the C compiler interpret the following two statements

- p=p+x;
- q=q+y;
- (a) p=p+x;  
    q=q+y
- (b)p=p+xq=q+y
- (c)p=p+xq;  
    q=q+y
- (d)p=p+x/q=q+y

*For questions 14,15,16,17 use the following alternatives*

- a.int
- b.char
- c.string
- d.float
- 14. '9'
- 15. "1 e 02"
- 16. 10e05
- 17. 15

18. Read the following code

```
# define MAX 100
# define MIN 100
.....
.....
if(x>MAX)
x=1;
else if(x<MIN)
x=-1;
x=50;
if the initial value of x=200,what is the value after executing this code?
```

- (a) 200
- (b) 1
- (c) -1
- (d) 50

19. A memory of 20 bytes is allocated to a string declared as char \*s  
then the following two statements are executed:

```
s="Entrance"
l=strlen(s);
what is the value of l ?
(a)20
(b)8
```

- (c)9
- (d)21

20. Given the piece of code

```
int a[50];
int *pa;
pa=a;
```

To access the 6th element of the array which of the following is incorrect?

- (a) \*(a+5)
- (b) a[5]
- (c) pa[5]
- (d) \*(\*pa + 5)

21. Consider the following structure:

```
struct num nam{
int no;
char name[25];
}
struct num nam n1[]={{{12,"Fred"},{15,"Martin"},{8,"Peter"},{11,Nicholas}}};
.....
.....
printf("%d%d",n1[2].no,*(n1 + 2).no) + 1);
```

What does the above statement print?

- (a) 8,9
- (b) 9,9
- (c) 8,8
- (d) 8,unpredictable value

22. Identify the in correct expression

- (a) a=b=3=4;
- (b) a=b=c=d=0;
- (c)float a=int b=3.5;
- (d)int a; float b; a=b=3.5;

23. Regarding the scope of the variables; identify the incorrect statement:

- (a) automatic variables are automatically initialised to 0
- (b) static variables are automatically initialised to 0
- (c) the address of a register variable is not accessible
- (d) static variables cannot be initialised with any expression

24. cond 1?cond 2?cond 3?:exp 1:exp 2:exp 3:exp 4;

is equivalent to which of the following?

- (a) if cond 1  
exp 1;  
else if cond 2

```
exp 2;
else if cond 3
exp 3;
else exp 4;
(b) if cond 1
if cond 2
if cond 3
exp 1;
else exp 2;
else exp 3;
else exp 4;
(c) if cond 1 && cond 2 && cond 3
exp 1 |exp 2|exp 3|exp 4;
(d) if cond 3
exp 1;
else if cond 2 exp 2;
else if cond 3 exp 3;
else exp 4;
```

25. The operator for exponentiation is

- (a) \*\*
- (b) ^
- (c) %
- (d) not available

26. Which of the following is invalid

- (a) a+=b
- (b) a\*=b
- (c) a>>=b
- (d) a\*\*=b

27. What is y value of the code if input x=10

```
y=5;
if (x==10)
else if(x==9)
else y=8;
(a)9
(b)8
(c)6
(d)7
```

28. What does the following code do?

```
fn(int n,int p,int r){
static int a=p;
switch(n){
case 4:a+=a*r;
```

```
case 3:a+=a*r;
case 2:a+=a*r;
case 1:a+=a*r;}}
```

- (a)computes simple interest for one year
- (b)computes amount on compound interest for 1 to 4 years
- (c)computes simple interest for four year
- (d)computes compound interest for 1 year

29. a=0;  
while(a<5)  
printf("%d\n",a++);  
How many times does the loop occurs?  
(a)infinite  
(b)5  
(c)4  
(d)6

30. How many times does the loop iterate ?  
for (i=0;i=10;i+=2)  
printf("Hi\n");  
(a)10  
(b) 2  
(c) 5  
(d) None of these

31. What is incorrect among the following  
A recursive function  
(a) calls itself  
(b) is equivalent to a loop  
(c) has a termination condition  
(d) does not have a return value at all

32. Which of the following go out of the loop if expn 2 becoming false  
(a) while(expn 1)\{...if(expn 2)continue;}  
(b) while(!expn 1)\{if(expn 2)continue;...}  
(c) do{..if(expn 1)continue;..}while(expn 2);  
(d) while(!expn 2)\{if(expn 1)continue;..\}

33. Consider the following program  
main()  
{unsigned int i=10;  
while(i>=0){  
printf("%u",i)  
i--;  
}}  
How many times the loop will get executed

- (a)10
- (b)9
- (c)11
- (d)infinite

34.Pick out the add one out

- (a) malloc()
- (b) calloc()
- (c) free()
- (d) realloc()

35.Consider the following program

```
main(){  
int a[5]={1,3,6,7,0};  
int *b;  
b=&a[2];  
}
```

The value of b[-1] is

- (a) 1
- (b) 3
- (c) -6
- (d) none

36. # define prod(a,b)=a\*b

```
main(){  
int x=2;  
int y=3;  
printf("%d",prod(x+2,y-10)); }
```

the output of the program is

- (a) 8
- (b) 6
- (c) 7
- (d) None

37.Consider the following program segment

```
int n,sum=1;  
switch(n){  
case 2:sum=sum+2;  
case 3:sum*=2;  
break;  
default:sum=0;}
```

If n=2, what is the value of sum

- (a) 0
- (b) 6
- (c) 3
- (d) None of these

38. Identify the incorrect one

- 1.if(c=1)
- 2.if(c!=3)
- 3.if(a<b)then
- 4.if(c==1)
  - (a) 1 only
  - (b) 1&3
  - (c) 3 only
  - (d) All of the above

39. The format specified for hexa decimal is

- (a) %d
- (b) %o
- (c) %x
- (d) %u

40. Find the output of the following program

```
main(){  
int x=5, *p;  
p=&x  
printf("%d",++*p);  
}  
(a) 5  
(b) 6  
(c) 0  
(d) none of these
```

41. Consider the following C code

```
main(){  
int i=3,x;  
while(i>0){  
x=func(i);  
i--;}  
int func(int n){  
static sum=0;  
sum=sum+n;  
return(sum);}
```

The final value of x is

- (a) 6
- (b) 8
- (c) 1
- (d) 3

43. Int \*a[5] refers to  
(a) array of pointers  
(b) pointer to an array  
(c) pointer to a pointer  
(d) none of these

44. Which of the following statements is incorrect

- (a) `typedef struct new{  
int n1;  
char n2;  
} DATA;`  
(b) `typedef struct {  
int n3;  
char *n4;}ICE;`  
(c) `typedef union{ int n5;  
float n6;} UDT;`  
(d) `#typedef union {  
int n7;  
float n8;} TUDAT;`  
Subject: TCS C Questions

-----  
1) Which of these is an invalid dataname?

- a) wd-count      b) wd\_count  
c) w4count      d) wdcountabcd

2) What is the output of the following program

```
main ()  
{  
    unsigned int i;  
  
    for (i = 10; i >= 0; i--)  
        printf ("%d", i);  
}
```

a) prints numbers 10 - 0      b) prints nos 10 - 1  
c)                                d) goes into infinite loop

11) What is the value of the following expression?

```
i = 1;  
i << 1 % 2  
a) 2 b)  
c) 1 d) 0
```

12) What is the value of the following expression?

```
i = 1;
```

$i = (i <= 1 \% 2)$   
a) 2 b)  
c) 0 d) erroneous syntax

What is the result?

- 13)  $*A + 1 - *A + 3$   
a) - b) -2  
c) 4 d) none of the above
- 14)  $\&A[5] - \&A[1]$ ?  
a) b)  
c) 4 d)

- 15) C allows  
a) only call by value  
b) only call by reference  
c) both  
d) only call by value and sometimes call by reference
- 16) The following statement is  
"The size of a struct is always equal to the sum  
of the sizes of its members"  
a) valid b) invalid c) can't say

- 17) How many x's are printed?  

```
for (i = 0, j = 10; i < j; i++, j--)  
    printf ("x");
```

a) 10 b) 5 c) 4 d) none

- 18) output?  

```
main ()  
{  
    int i = 2, j = 3, k = 1;  
    swap (i, j)  
    printf ("%d %d", i, j);  
}  
swap (int i, int j)  
{  
    int temp;  
    temp = i; i = j; j = temp;  
}
```

- 19) main ()  

```
{  
    int i = 2;  
    twice (2);  
    printf ("%d", i);
```

```

    }
twice (int i)
{
bullshit
}

int i, b[] = { 1, 2, 3, 4, 5 }, *p;
p = b;
++*p;
p += 2;

```

- 20) What is the value of \*p;  
 a) 2 b) 3 c) 4 d) 5
- 21) What is the value of (p - (&p - 2))?  
 a) b) 2 c) d)
- 23) x = fopen (b, c)  
 what is b?  
 a) pointer to a character array which contains the filename  
 b) filename within double quotes  
 c) can be anyone of the above  
 d) none
- 24) x = malloc (y). Which of the following statements is correct.  
 a) x is the size of the memory allocated  
 b) y points to the memory allocated  
 c) x points to the memory allocated  
 d) none of the above
- 25) which is the valid declaration?  
 a) #typedef struct { int i;}in;  
 b) typedef struct in {int i;};  
 c) #typedef struct int {int i;};  
 d) typedef struct {int i;} in;
- 26) union {  
 int no;  
 char ch;  
} u;  
What is the output?  
u.ch = '2';  
u.no = 0;  
printf ("%d", u.ch);  
a) 2 b) 0 c) null character d) none
- 27) Which of these are valid declarations?

i) union {  
    int i;  
    int j;  
};                 };

iii) union {  
    int i;  
    int j;  
    FILE k;  
};

ii) union u\_tag {  
    int i;  
    int j;  
};u;

- a) all correct      b) i, ii, iv  
c) ii & iv          d)

28) p and q are pointers to the same type of dataitems.

Which of these are valid?

- i) \*(p+q)  
ii) \*(p-q)  
iii) \*p - \*q

- a) all  
b)  
c) iii is valid sometimes

29) which are valid?

- i) pointers can be added  
ii) pointers can be subtracted  
iii) integers can be added to pointers  
a) all correct      b) only i and ii

30) int \*i;

float \*f;

char \*c;

which are the valid castings?

- i) (int \*) &c  
ii) (float \*) &c  
iii) (char \*) &i

31) int i = 20;

printf ("%x", i);

what is the output?

- a) x14      b) 14      c) 20      d) none of the above

32) main ()

```
{  
    char *name = "name";}
```

```

change (name);
printf ("%s", name);
}
change (char *name)
{
    char *nm = "newname";
    name = nm;
}
what is the output?
a) name      b) newname      c) name = nm not valid
d) function call invalid

```

33) char name[] = {'n', 'a', 'm', 'e'}  
 printf ("name = \n%s", name);  
 a) name =  
 name  
 b) name =  
 followed by funk characters  
 c) name = \nname  
 d) none

34) int a = 0, b = 2;  
 if (a = 0)  
 b = 0;  
 else  
 b \*= 10;  
 what is the value of b?  
 a) 0 b) 20 c) 2 d) none

35) int x = 2, y = 2, z = 1;  
 what is the value of x afterh the following statmements?  
 if (x = y%2)  
 z = crap  
 else  
 crap  
 a) 0 b) 2 c)1 d)none

37) output?  
 initially n = -24;  
 printd (int n)  
 {  
 if (n < 0)  
 {  
 printf ("-");  
 n = -n;

```

    }
    if (n % 10)
        printf ("%d", n);
    else
        printf ("%d", n/10);

    printf ("%d", n);
}
a. -24      b.24      c.      d.-224

```

38) float x, y, z;  
`scanf ("%f %f", &x, &y);`

if input stream contains "4.2 3 2.3 ..." what will x and y contain  
after scanf?

- a. 4.2, 3.0
- b. 4.2, 2.3
- c.
- d.

39) #define max(a,b) (a>b?b:a)  
`#define squire(x) x*x`

`int i = 2, j = 3, k = 1;`  
`printf ("%d %d", max(i,j), squire(k));`

output?  
a.32 b.23 c.31 d.13

40) struct adr {  
 char \*name;  
 char \*city;  
 int zip;  
};  
struct adr \*adradr;  
which are valid references?

- i) adr->name X
- ii) adradr->name
- iii) adr.zip X
- iv) adradr.zip

41) main (x, y)  
`int x, char *y[];`  
{  
`printf ("%d %s", x, y[1]);`

}

output when invoked as

prog arg1  
a. 1 prog b. 1 arg1 c. 2 prog d. 2 arg1

42) extern int s;

```
int t;  
static int u;  
main ()  
{  
}
```

which of s, t and u are available to a function present in another file

- a. only s
- b. s & t
- c. s, t, u
- d. none

43) main ()

```
{  
}  
int a;  
f1(){ }  
f2(){ }
```

which of the functions is int a available for?

- a. all of them
- b. only f2
- c. only f1
- d. f1 and f2 only

```
int a = 'a', d = 'd';  
char b = "b", c = "cr";
```

```
main ()  
{  
    mixup (a, b, &c);  
}  
mixup (int p1, char *p2, char **p3)  
{  
    int *temp;  
    ....doesnt matter.....  
}
```

44) what is the value of a after mixup?

a. a b.b c.c d.none of the above

45) what is the value of b after mixup?

a. a b.b c.c d.none of the above

46) main ()

```
{  
    char s[] = "T.C.S", *A;  
    print(s);  
}  
print (char *p)  
{  
    while (*p != '\0')  
    {  
        if (*p != ".")  
            printf ("%s", *p);  
        p++;  
    }  
}
```

output?

a.T.C.S

b.TCS

c.

d. none of the above

47) a question on do ... while

48) a question on % operator

49) main ()

```
{  
    int ones, twos, threes, others;  
    int c;
```

ones = twos = threes = others = 0;

while ((c = getchar ()) != EOF)

```
{  
    switch (c)  
    {  
        case '1': ++ones;  
        case '2': ++twos;  
        case '3': ++threes;  
        break;  
        default: ++others;  
        break;  
    }
```

```

    }
    printf ("%d %d", ones, others);
}

```

if the input is "1a1b1c" what is the output?

- a. 13
- b.
- c. 33
- d. 31

Tata Consultancy Services

### **COBOL Paper**

1) Which of these is an invalid dataname?

- a) wd-count
- b) wd\_count
- c) w4count
- d) wdcountabcd

2) What is the output of the following program

```

main ()
{
    unsigned int i;

    for (i = 10; i >= 0; i--)
        printf ("%d", i);
}

```

- a) prints numbers 10 - 0
- b) prints nos 10 - 1
- c)
- d) goes into infinite loop

11) What is the value of the following expression?

```

i = 1;
i << 1 % 2

```

- a) 2
- b)
- c) 1
- d) 0

12) What is the value of the following expression?

```

i = 1;
i = (i <<= 1 % 2)

```

- a) 2
- b)
- c) 0
- d) erroneous syntax

What is the result?

- 13) \*A + 1 - \*A + 3
  - a) -
  - b) -2
  - c) 4
  - d) none of the above
  
- 14) &A[5] - &A[1]?
  - a)
  - b)

c) 4 d)

15) C allows

- a) only call by value
- b) only call by reference
- c) both
- d) only call by value and sometimes call by reference

16) The following statement is

"The size of a struct is always equal to the sum  
of the sizes of its members"

- a) valid
- b) invalid
- c) can't say

17) How many x's are printed?

```
for (i = 0, j = 10; i < j; i++, j--)  
    printf ("x");  
a) 10      b) 5      c) 4      d) none
```

18) output?

```
main ()  
{  
    int i = 2, j = 3, k = 1;  
    swap (i, j)  
    printf ("%d %d", i, j);  
}  
swap (int i, int j)  
{  
    int temp;  
    temp = i; i = j; j = temp;  
}
```

19) main ()

```
{  
    int i = 2;  
    twice (2);  
    printf ("%d", i);  
}  
twice (int i)  
{  
    bullshit  
}
```

```
int i, b[] = {1, 2, 3, 4, 5}, *p;  
p = b;  
++*p;  
p += 2;
```

20) What is the value of \*p;

- a) 2
- b) 3
- c) 4
- d) 5

21) What is the value of (p - (&p - 2))?

- a)
- b) 2
- c)
- d)

23) x = fopen (b, c)

what is b?

- a) pointer to a character array which contains the filename
- b) filename within double quotes
- c) can be anyone of the above
- d) none

24) x = malloc (y). Which of the following statements is correct.

- a) x is the size of the memory allocated
- b) y points to the memory allocated

t

- c) x points to the memory allocated
- d) none of the above

25) Which is the valid declaration?

- a) #typedef struct { int i;}in;
- b) typedef struct in {int i;};
- c) #typedef struct int {int i;};
- d) typedef struct {int i;} in;

26) union {

    int no;

    char ch;

} u;

What is the output?

u.ch = '2';

u.no = 0;

printf ("%d", u.ch);

- a) 2
- b) 0
- c) null character
- d) none

27) Which of these are valid declarations?

i) union {                         ii) union u\_tag {  
            int i;                     int i;  
            int j;                     int j;  
        };                         };

iii) union {                     iv) union {  
            int i;                     int i;  
            int j;                     int j;  
            FILE k;                     }u;

};

- a) all correct      b) i, ii, iv
- c) ii & iv      d)

28) p and q are pointers to the same type of dataitems.

Which of these are valid?

- i) \*(p+q)
- ii) \*(p-q)
- iii) \*p - \*q

- a) all
- b)
- c) iii is valid sometimes

29) which are valid?

- i) pointers can be added
- ii) pointers can be subtracted
- iii) integers can be added to pointers
- a) all correct      b) only i and ii

30) int \*i;

float \*f;

char \*c;

which are the valid castings?

- i) (int \*) &c
- ii) (float \*) &c
- iii) (char \*) &i

31) int i = 20;

printf ("%x", i);

what is the output?

- a) x14      b) 14      c) 20      d) none of the above

32) main ()

```
{  
    char *name = "name";  
    change (name);  
    printf ("%s", name);  
}
```

change (char \*name)

```
{  
    char *nm = "newname";  
    name = nm;  
}
```

what is the output?

- a) name      b) newname      c) name = nm not valid  
d) function call invalid

33) char name[] = {'n', 'a', 'm', 'e'}

printf ("name = \n%s", name);

- a) name =  
    name  
b) name =  
    followed by funk characters  
c) name = \pname  
d) none

34) int a = 0, b = 2;

    if (a = 0)

        b = 0;

    else

        b \*= 10;

what is the value of b?

- a) 0 b) 20 c) 2 d) none

35) int x = 2, y = 2, z = 1;

what is the value of x afterh the following statmements?

if (x = y%2)

    z = crap

else

    crap

- a) 0 b) 2 c)1 d)none

37) output?

initially n = -24;

printd (int n)

{

    if (n < 0)

    {

        printf (" -");

        n = -n;

    }

    if (n % 10)

        printf ("%d", n);

    else

        printf ("%d", n/10);

        printf ("%d", n);

}

- a. -24 b.24 c. d.-224

38) float x, y, z;  
scanf ("%f %f", &x, &y);

if input stream contains "4.2 3 2.3 ..." what will x and y contain  
after scanf?

- a. 4.2, 3.0
- b. 4.2, 2.3
- c.
- d.

39) #define max(a,b) (a>b?b:a)  
#define square(x) x\*x

int i = 2, j = 3, k = 1;  
printf ("%d %d", max(i,j), square(k));

output?

- a. 32
- b. 23
- c. 31
- d. 13

40) struct adr {  
    char \*name;  
    char \*city;  
    int zip;  
};  
struct adr \*adraddr;  
which are valid references?

- i) adr->name X
- ii) adraddr->name
- iii) adr.zip X
- iv) adraddr.zip

41) main (x, y)  
int x, char \*y[];  
{  
    printf ("%d %s", x, y[1]);  
}  
output when invoked as  
    prog arg1  
a. 1 prog b. 1 arg1 c. 2 prog d. 2 arg1

42) extern int s;  
int t;  
static int u;  
main ()

```
{  
}
```

which of s, t and u are available to a function present in another file

- a. only s
- b. s & t
- c. s, t, u
- d. none

43) main ()

```
{  
}  
int a;  
f1(){  
f2(){  
}
```

which of the functions is int a available for?

- a. all of them
- b. only f2
- c. only f1
- d. f1 and f2 only

```
int a = 'a', d = 'd';  
char b = "b", c = "cr";
```

```
main ()  
{  
    mixup (a, b, &c);  
}  
mixup (int p1, char *p2, char **p3)  
{  
    int *temp;  
    ....doesnt matter.....  
}
```

44) what is the value of a after mixup?

- a. a
- b. b
- c. c
- d. none of the above

45) what is the value of b after mixup?

- a. a
- b. b
- c. c
- d. none of the above

46) main ()

```
{
```

```

char s[] = "T.C.S", *A;
print(s);
}
print (char *p)
{
    while (*p != '\0')
    {
        if (*p != ".")
            printf ("%s", *p);
        p++;
    }
}
output?
a.T.C.S
b.TCS
c.
d. none of the above

```

47) a question on do ... while

48) a question on % operator

49) main ()  
{  
 int ones, twos, threes, others;  
 int c;

ones = twos = threes = others = 0;

```

while ((c = getchar ()) != EOF)
{
    switch (c)
    {
        case '1': ++ones;
        case '2': ++twos;
        case '3': ++threes;
                    break;
        default: ++others;
                    break;
    }
}
printf ("%d %d", ones, others);
}
```

if the input is "1a1b1c" what is the output?

- a. 13
- b.

- c. 33
- a. 31

### **Technical Questions**

51.What is the efficiency of merge sort

Ans.  $O(n \log n)$

52.In which layer are routers used

Ans.In network layer

53.Which of the following sorting algorithem has average sorting behavior --

Bubble sort,merge sort,heap sort,exchange sort

Ans. Heap sort

54.In binary search tree which traversal is used for getting ascending order values--Inorder ,post order,preorder

Ans.Inorder

55.What are device drivers used for

Ans.To provide software for enabling the hardware

56.What is fork command in unix

Ans. System call used to create process

57.What is make command in unix

Ans. Used for creation of more than one file

58.In unix .profile contains

Ans. Start up program

59. In unix 'ls' stores contents in

Ans. inode block

60. Which of the following involves context switch,

- (a) system call
- (b) privileged instruction
- (c) floating point exception
- (d) all the above
- (e) none of the above

Ans: (a)

61. In OST, terminal emulation is done in

- (a) sessions layer
- (b) application layer
- (c) presentation layer
- (d) transport layer

Ans: (b)

62. For 1 MB memory, the number of address lines required,

- (a) 11
- (b) 16
- (c) 22
- (d) 24

Ans. (b)

63. Semaphore is used for

- (a) synchronization
- (b) dead-lock avoidance
- (c) box
- (d) none

Ans. (a)

64. Which holds true for the following statement

class c: public A, public B

- a) 2 member in class A, B should not have same name
- b) 2 member in class A, C should not have same name
- c) both
- d) none

Ans. (a)

65. Preprocessor does not do which one of the following

- (a) macro
- (b) conditional compilation
- (c) in type checking
- (d) including load file

Ans. (c)

66. Piggy backing is a technique for

- a) Flow control
- b) Sequence
- c) Acknowledgement
- d) retransmition

Ans. (c)

67. Which is not a memory management scheme?

- a) buddy system
- b) swapping
- c) monitors
- d) paging

Ans : c

68. There was a circuit given using three nand gates with two inputs and one output.

Find the output.

- a) OR
- b) AND
- c) XOR
- d) NOT

Ans. (a)

69. Integrated check value(ICV) are used as:

Ans. The client computes the ICV and then compares it with the senders value.

70. When applets are downloaded from web sites , a byte verifier performs \_\_\_\_\_?

Ans. Status check.

71. An IP/IPX packet received by a computer using... having IP/IPX both how the packet is handled.

Ans. Read the, field in the packet header with to send IP or IPX protocol.

72. The UNIX shell ....

- a) does not come with the rest of the system
- b) forms the interface between the user and the kernal
- c) does not give any scope for programming
- d) deos not allow calling one program from with in another
- e) all of the above

Ans. (b)

73. In UNIX a files i-node .....?

Ans. Is a data structure that defines all specifications of a file like the file size, number of lines to a file, permissions etc.

74. The very first process created by the kernal that runs till the kernal process is halts is

- a) init
- b) getty
- c) both (a) and (b)
- d) none of these

Ans. (a)

75. In the process table entry for the kernel process, the process id value is

- (a) 0
- (b) 1
- (c) 2
- (d) 255
- (e) it does not have a process table entry

Ans. (a)

76. Which of the following API is used to hide a window

- a) ShowWindow
- b) EnableWindow
- c) MoveWindow
- d) SetWindowPlacement
- e) None of the above

Ans. (a)

77. Which function is the entry point for a DLL in MS Windows 3.1

- a) Main
- b) Winmain
- c) Dllmain
- d) Libmain
- e) None

Ans. (b)

78. The standard source for standard input, standard output and standard error is

- a) the terminal
- b) /dev/null
- c) /usr/you/input, /usr/you/output/, /usr/you/error respectively
- d) None

Ans. (a)

79. The redirection operators > and >>

- a) do the same function
- b) differ : > overwrites, while >> appends
- c) differ : > is used for input while >> is used for output
- d) differ : > write to any file while >> write only to standard output
- e) None of these

Ans. (b)

80. The command grep first second third /usr/you/myfile

- a) prints lines containing the words first, second or third from the file /usr/you/myfile
- b) searches for lines containing the pattern first in the files second, third, and /usr/you/myfile and prints them
- c) searches the files /usr/you/myfiel and third for lines containing the words first or second and prints them
- d) replaces the word first with the word second in the files third and /usr/you/myfile
- e) None of the above

Ans. (b)

81. You are creating a Index on EMPNO column in the EMPLOYEE table. Which statement will you use?

- a) CREATE INDEX emp\_empno\_idx ON employee, empno;
- b) CREATE INDEX emp\_empno\_idx FOR employee, empno;
- c) CREATE INDEX emp\_empno\_idx ON employee(empno);
- d) CREATE emp\_empno\_idx INDEX ON employee(empno);

Ans. c

82. Which program construct must return a value?

- a) Package
- b) Function
- c) Anonymous block
- d) Stored Procedure
- e) Application Procedure

Ans. b

83. Which Statement would you use to remove the EMPLOYEE\_Id\_PK PRIMARY KEY constraint and all depending constraints from the EMPLOYEE table?

- a) ALTER TABLE employee DROP PRIMARY KEY CASCADE;
- b) ALTER TABLE employee DELETE PRIMARY KEY CASCADE;
- c) MODIFY TABLE employee DROP CONSTRAINT employee\_id\_pk CASCADE;
- d) ALTER TABLE employee DROP PRIMARY KEY employee\_id\_pk CASCADE;
- e) MODIFY TABLE employee DELETE PRIMARY KEY employee\_id\_pk CASCADE;

Ans. a

84. Which three commands cause a transaction to end? (Choose three)

- a) ALTER
- b) GRANT
- c) DELETE
- d) INSERT
- e) UPDATE
- f) ROLLBACK

Ans. a ,b ,f

85. Under which circumstance should you create an index on a table?

- a) The table is small.
- b) The table is updated frequently.
- c) A column's values are static and contain a narrow range of values.
- d) Two columns are consistently used in the WHERE clause join condition of SELECT statements.

Ans.d

86. What was the first name given to Java Programming Language.

- a) Oak - Java
- b) Small Talk

- c) Oak
- d) None

Ans.a

87. When a bicycle is in motion, the force of friction exerted by the ground on the two wheels is such that it acts

- (a) In the backward direction on the front wheel and in the forward direction on the rear wheel.
- (b) In the forward direction on the front wheel and in the backward direction on the rear wheel.
- (c) In the backward direction on both the front and rear wheels.
- (d) In the backward direction on both the front and rear wheels.

Ans. (d)

88. A certain radioactive element A, has a half life = t seconds.

In  $(t/2)$  seconds the fraction of the initial quantity of the element so far decayed is nearly

- (a) 29%
- (b) 15%
- (c) 10%
- (d) 45%

Ans. (a)

89. Which of the following plots would be a straight line ?

- (a) Logarithm of decay rate against logarithm of time
- (b) Logarithm of decay rate against logarithm of number of decaying nuclei
- (c) Decay rate against time
- (d) Number of decaying nuclei against time

Ans. (b)

90. A radioactive element x has an atomic number of 100.

It decays directly into an element y which decays directly into element z.

In both processes a charged particle is emitted.

Which of the following statements would be true?

- (a) y has an atomic number of 102
- (b) y has an atomic number of 101
- (c) z has an atomic number of 100
- (d) z has an atomic number of 101

Ans. (b)

91. If the sum of the roots of the equation  $ax^2 + bx + c=0$  is equal to the sum of the squares of their reciprocals

then  $a/c, b/a, c/b$  are in

- (a) AP
- (b) GP
- (c) HP
- (d) None of these

Ans. (c)

92. A man speaks the truth 3 out of 4 times.

He throws a die and reports it to be a 6.

What is the probability of it being a 6?

- (a) 3/8
- (b) 5/8
- (c) 3/4
- (d) None of the above

Ans. (a)

93. If  $\cos^2 A + \cos^2 B + \cos^2 C = 1$  then ABC is a

- (a) Right angle triangle
- (b) Equilateral triangle
- (c) All the angles are acute
- (d) None of these

Ans. (a)

94. Image of point (3,8) in the line  $x + 3y = 7$  is

- (a) (-1,-4)
- (b) (-1,4)
- (c) (2,-4)
- (d) (-2,-4)

Ans. (a)

95. The mass number of a nucleus is

- (a) Always less than its atomic number
- (b) Always more than its atomic number
- (c) Sometimes more than and sometimes equal to its atomic number
- (d) None of the above

Ans. (c)

96. The maximum KE of the photoelectron emitted from a surface is dependent on

- (a) The intensity of incident radiation
- (b) The potential of the collector electrode
- (c) The frequency of incident radiation
- (d) The angle of incidence of radiation of the surface

Ans. (c)

97. Which of the following is not an essential condition for interference

- (a) The two interfering waves must be propagated in almost the same direction or  
the two interfering waves must intersect at a very small angle
- (b) The waves must have the same time period and wavelength
- (c) Amplitude of the two waves should be the same
- (d) The interfering beams of light must originate from the same source

Ans. (c)

98. When X-Ray photons collide with electrons

- (a) They slow down
- (b) Their mass increases
- (c) Their wave length increases
- (d) Their energy decreases

Ans. (c)

99. An electron emits energy

- (a) Because it's in orbit
- (b) When it jumps from one energy level to another
- (c) Electrons are attracted towards the nucleus
- (d) The electrostatic force is insufficient to hold the electrons in orbits

Ans. (b)

100. How many bonds are present in CO<sub>2</sub> molecule?

- (a) 1
- (b) 2
- (c) 0
- (d) 4

Ans. (d)

## Questions from placement cell

1. What is the difference between a latch and a flip flop. For the same input, how would the output look for a latch and for a flip-flop.
2. Finite state machines:  
(2.1)Design a state-machine (or draw a state-diagram) to give an output '1' when the # of A's are even and # of B's are odd. The input is in the form of a serial-stream (one-bit per clock cycle). The inputs could be of the type A, B or C. At any given clock cycle, the output is a '1', provided the # of A's are even and # of B's are odd. At any given clock cycle, the output is a '0', if the above condition is not satisfied.  
(2.2). To detect the sequence "abca" when the inputs can be a b c d.
3. minimize a boolean expression.
4. Draw transistor level nand gate.
5. Draw the cross-section of a CMOS inverter.
6. Deriving the vectors for the stuck at 0 and stuck at 1 faults.
7. Given a boolean expression he asked me to implement just with muxes but nothing else.
8. Draw Id Vds curves for mosfets and explain different regions.
9. Given the transfer characteristics of a black box draw the circuit for the black box.
10. Given a circuit and its inputs draw the outputs exact to the timing.
11. Given an inverter with a particular timing derive an inverter using the previous one but with the required timing other than the previous one.
12. Change the rise time and fall time of a given circuit by not changing the transistor sizes but by using current mirrors.
13. Some problems on clamping diodes.

**These are some of the questions asked by Microsoft.**

**(I feel that these type of questions are asked even in Electrical Engineering interviews.**

**Make sure you browse them.)**

1. Given a rectangular (cuboidal for the puritans) cake with a rectangular piece removed (any size or orientation), how would you cut the remainder of the cake into two equal halves with one straight cut of a knife ?
  2. You're given an array containing both positive and negative integers and required to find the sub-array with the largest sum ( $O(N)$  a la KBL).
- Write a routine in C for the above.

3. Given an array of size N in which every number is between 1 and N, determine if there are any duplicates in it. You are allowed to destroy the array if you like.
4. Write a routine to draw a circle ( $x^{**} 2 + y^{**} 2 = r^{**} 2$ ) without making use of any floating point computations at all.
5. Given only putchar (no sprintf, itoa, etc.) write a routine putlon the prints out an unsigned long in decimal.
6. Give a one-line C expression to test whether a number is a power of 2. [No loops allowed - it's a simple test.]
7. Given an array of characters which form a sentence of words, give an efficient algorithm to reverse the order of the words (no characters) in it.
8. How many points are there on the globe where by walking one mile south, one mile east and one mile north you reach the place where you started.
9. Give a very good method to count the number of ones in a 32 bit number. (caution: looping through testing each bit is not a solution)
10. What are the different ways to say, the value of x can be either a 0 or a 1. Apparently the if then else solution has a jump when written out in assembly.

```
if (x == 0)
y=0
else
y =x
```

There is a logical, arithmetic and a datastructure soln to the above problem.

#### **Logic design:**

1. Draw the transistor level CMOS #input NAND or NOR gate. After drawing it lot of qestions on that ckt will be asked.
2. Transistor sizing for given rise time and fall time. How do you size it for equal rise and fall time.
3. Given a function whose inputs are dependent on its outputs. Design a sequential circuit.
4. Design a finite state machine to give a modulo 3 counter when x=0 and modulo 4 counter when x=1.
5. Given a boolean equation minimize it.
6. Given a boolean equation draw the transistor level minimum transistor circuit.
7. What is the function of a D-flipflop, whose inverted outputs are connected to its input ?
8. What will you do if you want to drive a large capacitance ?

#### **Layout related questions:**

1. asked me to layout the 3 input nand gate.
  2. Later he asked me to modify it to consume as much less space as we can.
  3. He also asked me about the transistor sizing.
- 

1. He asked me to draw the cross section of an inverter and asked me to show all the capacitances on it and reason for those capacitances.
2. Describe the latchup effect.
3. More about the tristate buffers.

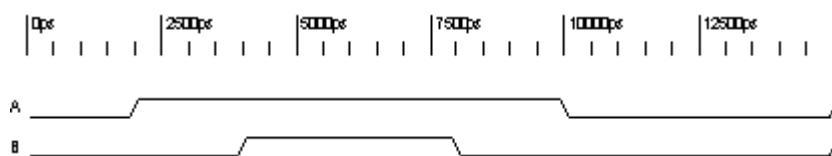
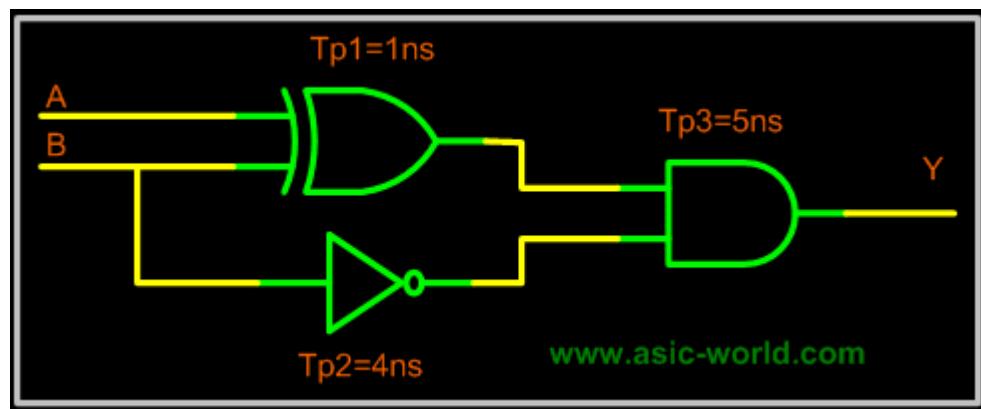
3. What will be the voltage at the output node of a triostate buffer in its high impedance state. He gave a waveform for the input and asked me to draw the output waveform for that.
4. Posed a lot of questions on charge sharing problems and keeper circuits.
5. Asked me to draw the  $I_d$   $V_{ds}$  curves for mosfet. Asked me to explain the regions and some causes for that curve like channel width modulation.
6. He asked me about the electron migration effect and methods to avoid it.
7. Asked me to draw the dynamic logic of a particular gate and then posed lots of tricky questions from the previous discussion.
8. He asked me to draw the 6 transistor contemporary sram cell and asked me to explain how the reading and writing is done in it.
9. Something about trip point.

**Computer Architecture Questions:**

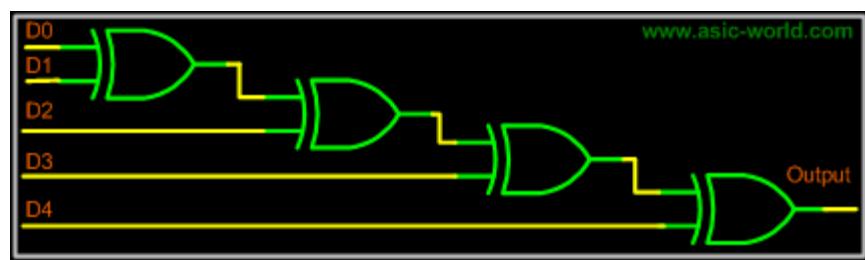
1. Explain what is DMA?
2. what is pipelining?
3. what are superscalar machines and vliw machines?
4. what is cache?
5. what is cache coherency and how is it eliminated?
6. what is write back and write through caches?
7. what are different pipelining hazards and how are they eliminated.
8. what are different stages of a pipe?
9. explain more about branch prediction in controlling the control hazards
10. Give examples of data hazards with pseudo codes.
11. Calculating the number of sets given its way and size in a cache?
12. How is a block found in a cache?
13. scoreboard analysis.
14. What is miss penalty and give your own ideas to eliminate it.
15. How do you improve the cache performance.
16. Different addressing modes.
17. Computer arithmetic with two's complements.
18. About hardware and software interrupts.
19. What is bus contention and how do you eliminate it.
20. What is aliasing?
- 21) What is the difference between a latch and a flip flop?
- 22) What is the race around condition? How can it be overcome?
- 23) What is the purpose of cache? How is it used?
- 24) What are the types of memory management

What is  
the output  
of AND  
gate in the  
circuit  
below,

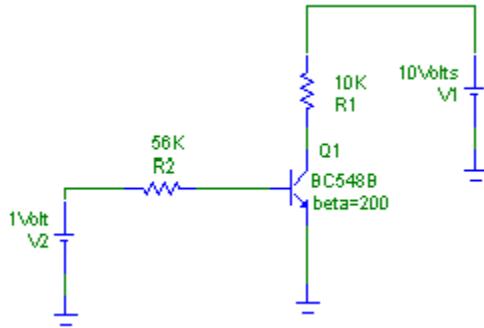
when A  
and B are  
as in  
waveform?  
Tp is the  
gate delay  
of  
respective  
gate.



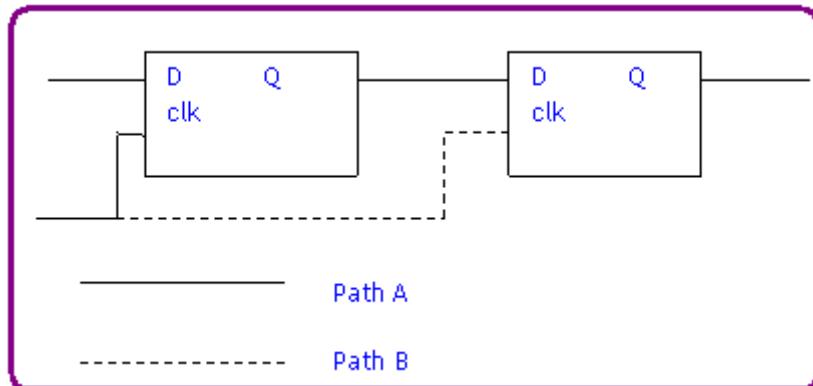
❖ Identify the circuit below, and its limitation.



❖ What is the current through the resistor R1 ( $I_C$ ) ?

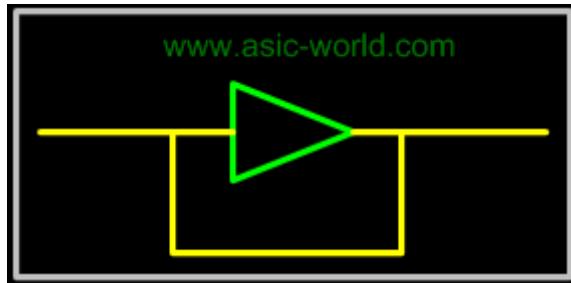


- ❖ Referring to the diagram below, briefly explain what will happen if the propagation delay of the clock signal in path B is much too high compared to path A. How do we solve this problem if the propagation delay in path B can not be reduced ?

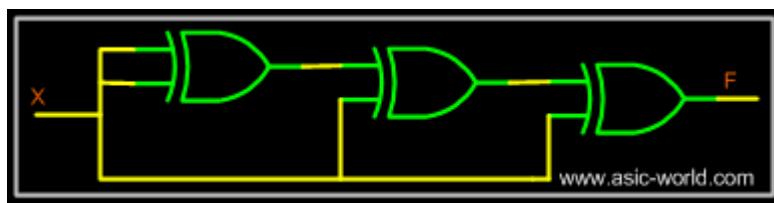


- ❖ What is the function of a D flip-flop, whose inverted output is connected to its input ?
- ❖ Design a circuit to divide input frequency by 2.
- ❖ Design a divide-by-3 sequential circuit with 50% duty cycle.
- ❖ Design a divide-by-5 sequential circuit with 50% duty cycle.
- ❖ What are the different types of adder implementations ?
- ❖ Draw a Transmission Gate-based D-Latch.
- ❖ Give the truth table for a Half Adder. Give a gate level implementation of it.
- ❖ What is the purpose of the buffer in the circuit below, is it necessary/redundant

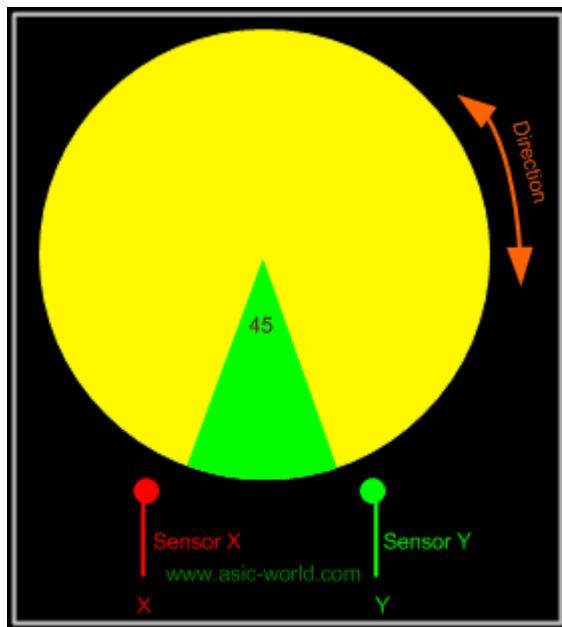
to have a buffer ?



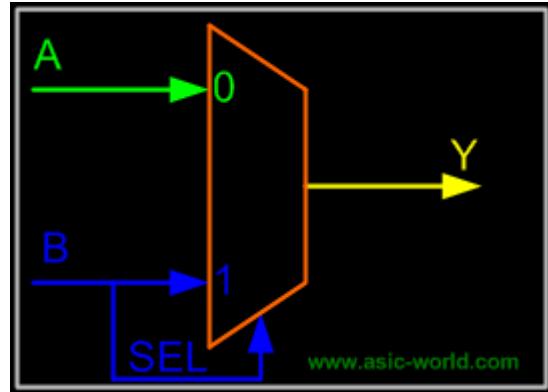
- ❖ What is the output of the circuit below, assuming that value of 'X' is not known ?



- ❖ Consider a circular disk as shown in the figure below with two sensors mounted X, Y and a blue shade painted on the disk for an angle of 45 degree. Design a circuit with minimum number of gates to detect the direction of rotation.

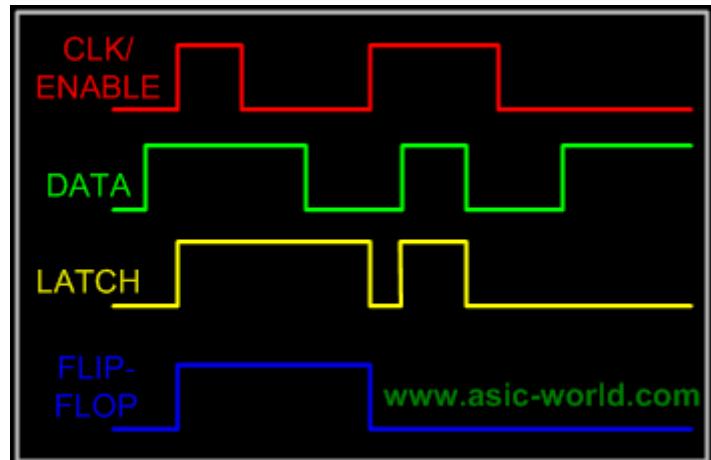


- ❖ Design an OR gate from 2:1 MUX.

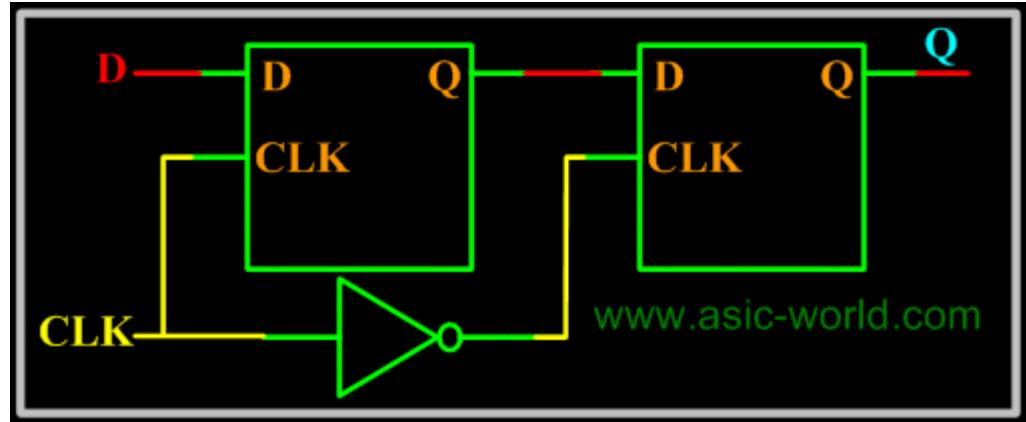


- ❖ Design an XOR gate from 2:1 MUX and a NOT gate
- ❖ What is the difference between a LATCH and a FLIP-FLOP ?

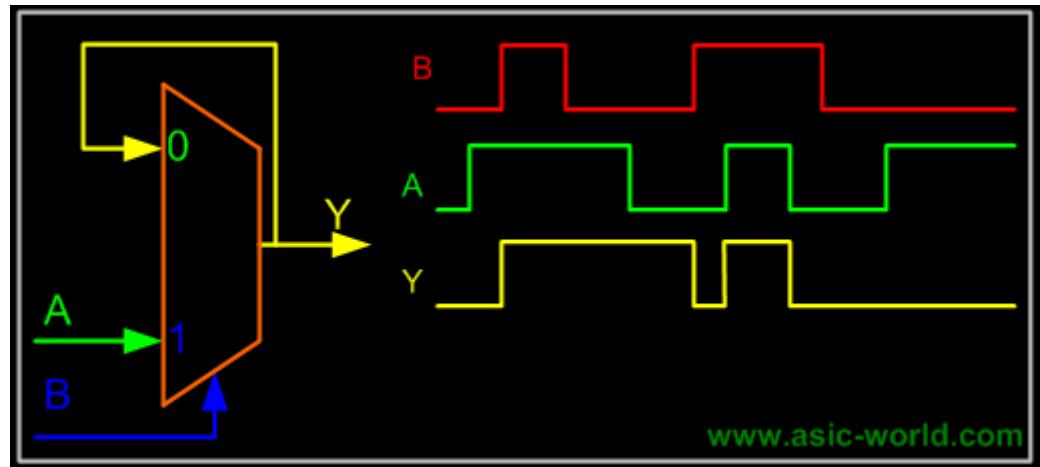
- Latch is a level sensitive device while flip-flop is an edge sensitive device.
- Latch is sensitive to glitches on enable pin, whereas flip-flop is immune to glitches.
- Latches take less gates (also less power) to implement than flip-flops.
- Latches are faster than flip-flops.



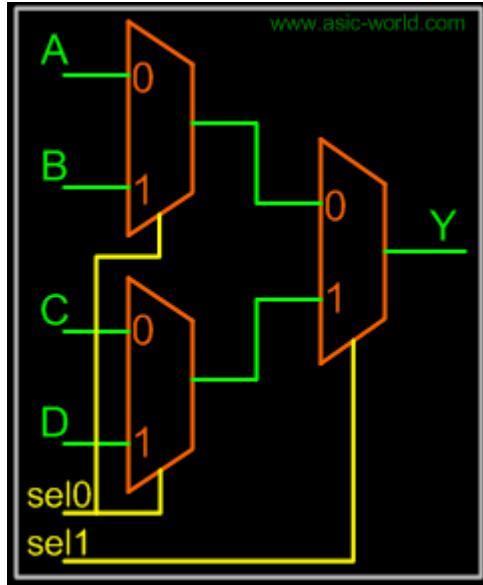
- ❖ Design a D Flip-Flop from two latches.



- ❖ Design a 2 bit counter using D Flip-Flop.
- ❖ What are the two types of delays in any digital system ?
- ❖ Design a Transparent Latch using a 2:1 Mux.



- ❖ Design a 4:1 Mux using 2:1 Muxes and some combo logic.



- ❖ What is metastable state ? How does it occur ?
- ❖ What is metastability ?
- ❖ Design a 3:8 decoder
- ❖ Design a FSM to detect sequence "101" in input sequence.
- ❖ Convert NAND gate into Inverter, in two different ways.
- ❖ Design a D and T flip flop using 2:1 mux; use of other components not allowed, just the mux.
- ❖ Design a divide by two counter using D-Latch.
- ❖ Design D Latch from SR flip-flop.
- ❖ Define Clock Skew , Negative Clock Skew, Positive Clock Skew.
- ❖ What is Race Condition ?
- ❖ Design a 4 bit Gray Counter.
- ❖ Design 4-bit Synchronous counter, Asynchronous counter.
- ❖ Design a 16 byte Asynchronous FIFO.

- ❖ What is the difference between an EEPROM and a FLASH ?
- ❖ What is the difference between a NAND-based Flash and a NOR-based Flash ?
- ❖ You are given a 100 MHz clock. Design a 33.3 MHz clock with and without 50% duty cycle.
- ❖ Design a Read on Reset System ?
- ❖ Which one is superior: Asynchronous Reset or Synchronous Reset ? Explain.
- ❖ Design a State machine for Traffic Control at a Four point Junction.
- ❖ What are FIFO's? Can you draw the block diagram of FIFO? Could you modify it to make it asynchronous FIFO ?
- ❖ How can you generate random sequences in digital circuits?

### **2011 TCS Technical Interview Questions:-**

1. What does static variable mean?
2. What is a pointer?
3. What is a structure?
4. What are the differences between structures and arrays?
5. In header files whether functions are declared or defined?
6. What are the differences between malloc() and calloc()?
7. What are macros? what are its advantages and disadvantages?
8. Difference between pass by reference and pass by value?
9. What is static identifier?
10. Where are the auto variables stored?
11. Where does global, static, local, register variables, free memory and C Program instructions get stored?
12. Difference between arrays and linked list?
13. What are enumerations?
14. What is a class?
15. What is an object?
16. What is the difference between an object and a class?
17. What is the difference between class and structure?
18. What is public, protected, private?
19. What are virtual functions?
20. What is friend function?
21. What is a scope resolution operator?
22. What do you mean by inheritance?
23. What is abstraction?

24. What is a data structure?
25. What does abstract data type means?
26. Evaluate the following prefix expression " ++ 26 + - 1324" (Similar types can be asked)
27. Convert the following infix expression to post fix notation  
 $((a+2)*(b+4)) -1$  (Similar types can be asked)
28. How is it possible to insert different type of elements in stack?
29. Stack can be described as a pointer. Explain.
30. Write a Binary Search program
31. What is the difference between an Abstract class and Interface?
32. What is user defined exception?
33. What do you know about the garbage collector?
34. What is the difference between java and c++?
35. In an HTML form I have a button which makes us to open another page in 15 seconds. How will you do that?
36. What is the difference between process and threads?
37. What is update method called?
38. Have you ever used HashTable and Directory?
39. What are statements in Java?
40. What is RMI?
41. Explain about RMI Architecture?
42. What are Servelets?
43. What is the use of servlets?
44. Explain RMI Architecture?
45. How will you pass values from HTML page to the servlet?
46. How do you load an image in a Servelet?
47. What is purpose of applet programming?
48. How will you communicate between two applets?
49. What are the basic functions of an operating system?
50. Explain briefly about, processor, assembler, compiler, loader, linker and the functions executed by them.
51. What are the difference phases of software development? Explain briefly?
52. Differentiate between RAM and ROM?
53. What is DRAM? In which form does it store data?
54. What is cache memory?
55. What is hard disk and what is its purpose?
56. Differentiate between Complier and Interpreter?
57. What are the different tasks of Lexical analysis?
58. What are the different functions of Syntax phase, Sheduler?

## **Collection from students:**

1. Difference between microcontroller and microprocessor
2. Tell about linear integrated circuits
3. Different types of diodes
4. RS 232
5. Mini project ----> Role
  - i. ----> Explanations
6. Different Types of Communications
7. Different Modulations techniques
8. Pointers, Data Types

---
9. Tell about yourself?
10. What are your hobbies?
11. Tell About your Project?
12. What is Machine Language? Binary language and High level language.

---
13. Tell Me languages which you know other than 'C'
14. What is Pointer and Variable
15. Tell me about your interested subject
16. About your Miniproject
17. Something about 'C'
18. Difference between microprocessors and Microcontroller

---
19. Tell me about yourself
20. Differences between AM and FM
21. Difference between microcontroller and microprocessor
22. What is latest satellite launched

23. Difference between C and C++

24. What is Zigbee

25. What is electronics

26. What is the principle used in Transformer

---

27. Write any C Program

28. Tell about your Project

29. What other languages do u know

30. US crisis

31. Why did u get less percentage in B.Tech when compared to ssc & Intermediate

32. Why only TCS

33. Why did u choose ECE

---

34. Full form of VOIP

35. Tell me about Your self

36. Tell me about your parents

37. Difference between microcontroller and microprocessor

38. Difference between functions and procedures

39. Loops used in 'C'

40. Difference between While loop and for loop

41. Difference between amplifier and oscillator

42. Difference between Transistor and diode

43. Why should I take u

44. Do you think will you get into TCS

45. What are the various techniques in DC

---

46. Describe yourself in One Word? Explain

47. About poster and paper presentation

48. Project related questions

49. Questions on favorite subjects

50. Why do you want to join in IT inspite of being in ECE? support your answer

51. What is the reason for getting 80% in B.Tech ,90% in inter and ssc

52. What is main according to you IT or ECE

53. Hoe IT can help a farmer

54. C Program based on Strings

55. Given a problem? How you solve?What is approach

56. Why you have taken ECE inspite of having in It

57. Tell about C

58. How IT can help a comman man

---

59. Phase locked loop

60. Flipflop

61. About your self

62. Zener diode

63. Multivibrators

64. About area of intrest

65. Questions on miniproject

---

66. Tell me about yourself

67. Ex-or Truthtable

68. Nor Truth Table

69. Print 10 odd numbers in C language write logic

70. What kind of company is TCS

---

71. Difference between microcontroller and microprocessor

72. Define pointers

73. Define variable

74. What is EDC

---

75. About mini project and the components used in it

76. Truthtables of NOR and XOR gates

77. Name of Core subjects

78. Difference between microcontroller and microprocessor

79. Difference between while and do-while

80. What are control statements in C

---

81. What are different data types in C

82. Tell about yourself

83. Difference between C and Java

84. Explain about your miniproject

85. How can you contribute to TCS

86. Why ECE and later software

87. Justify your achievements

88. Areas of interest (any two subjects)---→ questions on them

89. How can you bring in team spirit among your co workers

90. About robotics---→ where do you use them in practical cases

91. Components used in ROBOTICS

---

92. Which part of C is mostly used while programming

93. Syntax of pointers

94. Passing parameters to functions

95. Enum concept

96. Project-difficulties faced

97. Any device you worked with

---

98. Tell about yourself in 30 seconds

99. Difference between microcontroller and microprocessor

100. Being an ECE student why do you want to join the IT Company

101. Basics of C

102. About the project

103. Programs on strings

---

104. How many types of antennas are there name them

105. Half duplex and full duplex

106. Why zener diode is used in Reverse bias condition

107. Amplitude modulation and frequency modulation

108. What is C and C++? What are functions of C++

109. What is DSP?difference b/w DSP's and general processors

110. Polymorphism?date?memory?address?\

111. What is the feature of polymorphism?what are its different forms

---

112. Difference between AM and FM.Which is preferred

113. Bluetooth range

114. WIFI Range

115. Wimax range

116. Jk and D flipflop

117. Tell me about your self

118. Zigbee protocol

119. How many employees are there in TCS

120. Half,full wave and Bridge rectifier

121. Coding techniques

- 
122. MIMO is an Acronym
- 
123. About project, complete knowledge of project
124. Any language other than C
125. Current affairs
126. Dollar value and euro value
127. Capitals, what are the countries around india
128. General questions
129. Favourite subject, depth questions on the interested questions.
- 
130. Truth tables of NOR,XOR,NAND,AND
131. Frequency range of Bluetooth.....
132. Loops in C:sentences or statements
133. About mini project
- 
134. What do you know about C
135. Writ any C program
136. Differences between array and structures
137. What do you know about TCS
138. Tell me about yourself
139. Family background
140. What are your extracurricular activities
141. What will you do in TCS if you get a job
142. A car with 4 wheels and each wheel has 4 screwa if all the 4 screws of a wheel are lost how will you manage the situation
- 
143. What could you achieve so far
144. What good have you done to college
145. What all tasks could you break in your B.Tech life

146. Where do you want to see yourself in the next 5 years

147. Why TCS

148. Capitals of countries

149. Current politics

---

150. Basic From C,Sorting Methods

151. About TCS

152. Y they would hire me

153. Why only TCS

154. What is special about you

155. Family background

156. Do you know any one in TCS

157. Tell me about yourself

158. Project—very important

---

159. Tell me about yourself

160. What is a pointer

161. What is FPGA

162. Difference between AM and FM

163. What is a modulation

164. Difference between microcontroller and microprocessor

165. Range of Bluetooth

166. Why are printf and scanf statement used

167. What is the use of studio.h

168. What is a header file

169. What is pre-emphasis and De-emphasis

170. Tell me about your academic projects

---

171. what is your knowledge in C
172. Define strings
173. Call by reference and callby value and syntax for above
174. Write a program to print even no's upto 100
175. Your favorite subject in core
176. Differences between analog and digital with wave forms
177. Why only TCS
178. Do you think you are efficient for this field?
179. How can a ece student fit into IT sector?
180. Sorting and searching techniques

---
181. Tell about yourself
182. Area of interest
183. Differences between analog and digital
184. Mobile communications
185. Is it possible to use mp's in communications
186. What is IT
187. Why IT
188. How are you adaptable
189. Tell about yourself? if you have leadership skills tell with an example
190. Tell about you family background
191. Detail about project? Scope of project? Extentions and future use of project?
192. Short term goal and long term goal
193. Who is your role and why
194. Why do you want to join in TCS and what will you do by joining in TCS
195. Area of interest? what is the circuits you are dealing in your favorite subjects
196. What is opamp?why we are using

197. What is binary language? Machine language? high level language
198. What is modulation? difference b/w Am and FM
199. What is the frequency of Bluetooth? What is the range of terrestrial frequency
200. What is FPGA and VOIP
201. Why we are calling waves as microwaves? what is the term micro refers
202. What is the frequency range of microwave
203. Why we are using C language?
204. What is the difference b/w char and variable char? write and example program
205. What is a variable?
206. What are different data types in 'C' what is difference b/w long int and int? why we are using long char
- 
207. What is sorting write any method of sorting
- 
208. What are your areas of interest?
- 
209. Why you like these subjects?
210. Why only C, you have java as a subject the why not java
- 
211. What is pointer, variable, data, swapping program, Fibonacci series etc
- 
212. Program for finding of negative number
213. Program to find factorial using recursive
214. Call by reference pgm for swapping of numbers
215. How transistor is used as diode
- 
216. Tell about your project
- 
217. Tell me about yourself?
218. Explain in brief about your miniproject? software used? applications
219. Difference between microcontroller and microprocessor
220. Program on prime no, recursion, factorial
221. Questions on C, java
222. About TCS? Terms and conditions, do u know about bond in TCS

223. AND,OR gate ,can AND gate formed using NAND gates?How?draw it and explain

224. Differences b/w while and for loop

---

225. Tell me about yourself

226. What are your long term and short term goals

227. RS 232

228. Pointer

229. CMRR and why it is used

230. Range of Bluetooth,wifi,wimax

231. What id DFF

232. Types of loops used

233. Differences b/w structures and unions

234. Why modulation is done

235. Difference between function and program

236. Why TCS

237. What is terrestrial propagation

238. Explain in detail about miniproject and what is your role

239. Different subjects in ECE stream

---

240. How are you

241. What are your favorite subjects?

242. Difference between microcontroller and microprocessor

243. What is FM and AM? Which one is preferred and why?

244. Define FM and AM

245. What is C

246. What is C++

- 247. Difference b/w C and C++
  - 248. What is a Object
  - 249. Frequency range of Bluetooth,wifi,wimax
  - 250. Define moore's Law
  - 251. On which principle transformer works
  - 252. Are you confident?think once
  - 253. What are the other subjects you want to ask questions
- 

- 254. Tell me about yourself
  - 255. Tell about C
  - 256. What is a pointer
  - 257. What is a variable in C
  - 258. What is memory
  - 259. What is CPU
  - 260. What are your favorite subjects in B.Tech
  - 261. Tel something about microwave engineering
  - 262. What is your short term goal in TCS
  - 263. After going into TCS how could I come understand that you are good at your job?  
what should I observe in you
  - 264. You and your friend are given same project with same time boundary, I am the  
judge and for me to declare you're as best friend what strategies will u implement
- 

- 265. Frequency range of Bluetooth,wifi,wimax
- 266. Data types in C
- 267. Difference between microcontroller and microprocessor
- 268. Explain about your project
- 269. What is your role

270. Explain about your project

271. Expand EDFA

272. VOIP

273. Interested subjects

274. Any questions to ask

275. Ready to work in shifts

276. Ready to relocate yourself

277. Ready to sign the bond

---

278. Tell me about yourself

279. Tell me about your project

280. Are you familiar with C language

281. What is pointer and give example

282. What is function and give example

283. Tel me about area of interest

284. What are the basic components used in LICA

---

285. What is C

286. What is programming language

287. What is EDFA

288. Bandwidth of zigbee,Bluetooth,wimax

289. Why only tcs

290. What is CMM

291. What is diode

292. What is electronics?what is communications

293. Diode operation in farward bias and reverse bias

294. Pointer

- 295. User defined data type in C
- 296. Use of unions instead of structures
- 297. What is Type def
- 298. How do you input characters
- 299. Data types in C
- 300. Differences between c,C++,java
- 301. Who is the inventor of C
- 302. What is GUI
- 303. Different versions of C
- 304. Different types of filters

---
- 305. Tell me about yourself
- 306. About my ATL Project
- 307. About mini project
- 308. Truth table for XOR,OR,NOR and SR Flip flop
- 309. Control statements in C
- 310. Differences between While and DO While
- 311. Program to find out EVEN or ODD in the array
- 312. Why you prefer IT service company rather than other company
- 313. Difference between function and procedure

---
- 314. Tell me about ur self and your family
- 315. Tell me about projects and interships
- 316. Favorite subject,mention any three subjects
- 317. Explain sequential logic circuits
- 318. What are the programming languages know

---
- 319. Tell me about yourself

- 320. Family background
  - 321. What programming languages you know
  - 322. What is a pointer
  - 323. What is address
  - 324. What is a memory location
  - 325. Diff b/w AM and FM
  - 326. What is Lenz's Law
- 

- 327. Tell me about yourself
  - 328. RS 232
  - 329. Modulation and demodulation techniques
  - 330. Range of Bluetooth,wifi,wimax
  - 331. Diff b/w structure and union
  - 332. What is pointer and control statements
  - 333. Different signaling techniques
  - 334. What is a function
  - 335. Difference b/w for and DO while
  - 336. Tell me about mini project
  - 337. Tell me any 3 areas of interest(technical subjects)
  - 338. Tell about your paper presentation
- 

- 339. Tell me about yourself and the family background
  - 340. What is the difference b/w C & C++
  - 341. What is java
  - 342. Difference b/w microprocessor &microcontroller
  - 343. What is a pointer?variable?address?
  - 344. What is lenz's law
-

345. What is EDFA
346. What is VOIP
347. What is your favorite subject
348. What is RS 232
349. What is AM and FM(differences)
350. How many loops are there in C language
351. Difference between C and C++
352. How many employees are there in TCS
353. Tell me what do you know about TCS
354. If I give you job in TCS what will you do?after 5 years where do you see yourself
355. Do u wish to study higher studies
356. Tell me about yourself
357. Bluetooth and wifi ranges
- 
358. Difference b/w file and structure
359. Writ any code for sorting technique
360. Why TCS
361. Tell about yourself
362. You have got good % in your branch. Do you think you are doing injustice to your branch by joining TCS
363. Tell me about your family
364. Do you prefer working in weekends? reallocating yourself
365. What are the projects and presentations you have
366. Do you think man is powerful or Robot is powerful
- 
367. Tell me about yourself
368. Tell me about your family

- 369. What do you know about C
  - 370. What is the transmission range of Bluetooth and wifi,wimax
  - 371. What is moore's law
  - 372. What are coding techniques
  - 373. Say something about diode
  - 374. What is the difference between while and for loop
  - 375. What is lenz's law
- 

- 376. How are you
  - 377. Tell me about yourself
  - 378. What is lenz's law
  - 379. How many types of loops are there in C
  - 380. What is the difference between while and for loop
  - 381. What is the transmission range of Bluetooth,wifi,wimax
  - 382. Basics of C
- 

- 383. Different types of loops in C
  - 384. Different bandwidth and frequency of Bluetooth ,wifi,wimax
  - 385. Different loops in C
  - 386. How does a microwave oven work
  - 387. Most of the questions relating to project done
  - 388. About ourselves
  - 389. Diff between AM and FM
- 

- 390. Tell me about yourself
- 391. Project
- 392. What are the subjects in the previous semester
- 393. What is Cauchy theorem

394. What is liebnitz's theorem
395. What are the methods you use to solve simultaneous linear equations
396. Give me the algorithm for gauss jordan method
397. What are your fields of interest
398. What is the degree of freedom
399. Tell me the applications of microprocessors
400. What is an induction motor
401. Program to reverse the single linked list with 3 nodes
402. ALP to find the largest no in the given array
403. Why ECE and why TCS
404. Any question do you want to ask me
- 
405. Difference between MP and MC
406. Questions on C language like to write a program
407. About the projects which me did, presently running
408. About ourself
- 
409. Tell me about yourself
410. Presentation and project
411. Differences between functions and procedure
412. Differences between while and do while
413. Write a program to print odd numbers
414. What are your core subjects
415. Why ece? why IT
- 
416. Tell about yourself
417. How you tell if u r part of TCS
418. Zener diode voltage regulation and application

- 419. PDC basics
  - 420. Oppose Anna Hazare. On which point you will oppose
  - 421. Some questions on drawing
  - 422. Program on Fibonacci series
  - 423. Mini project and their applications
  - 424. Any extracurricular activities except academics
  - 425. Any loving hobbies
- 
- 426. Tell me about yourself
  - 427. Tell me about your projects
  - 428. Real time application projects
  - 429. Questions on C like swapping two values without using a temporary variable
  - 430. Difference between while and Do while
  - 431. Questions on logic gates
  - 432. Why shifting from core side to IT field
- 
- 433. How are You feeling
  - 434. Tell me about yourself
  - 435. Tell me about your family background
  - 436. What are your top 3 core subjects
  - 437. What is FPGA
  - 438. What is EDFA
  - 439. Why does an opamp have high input impedance and low output impedance
  - 440. Explain the concept of OOPS
  - 441. Tell me about Zigbee
  - 442. What is the use of Hardware programming language

443. What is lenz's law

444. Application of your mini project

---

445. What is polymorphism

446. Difference between C++ and java

447. How is java platform oriented

448. Features of JAVA

449. Simple programs

450. Working of filters and opamps

451. Features of C

---

452. What do you know about anna hazareand US crisis

453. What is DDOA

454. What is VOIP

455. Program of reversing a string

456. Explain about mini project

457. Suppose there are four types of cars. one is stolen and brought back without bolts  
now how will you run the car(no stepny and we have to run using what we have only)

---

458. What is Electronics? what is Communications

459. What are the components in the EDC

460. Difference between microprocessor and microcontroller

461. Role in the project

462. Can a microprocessor placed in the microcontroller

463. Pin diagram if 555 timer

464. How do you adapt Calcutta

465. What are the 2-2 semester subjects

466. Founder of C

- 467. Tell me about yourself
  - 468. Factorial and palindrome program
  - 469. Malloc and calloc
  - 470. Why IT job? why not core Job?
  - 471. What are your hobbies
  - 472. Full form of IEEE
  - 473. What is android
  - 474. What are the drawbacks in you
- 

- 475. tell me about yourself
- 476. Tell me about your projects
- 477. What is your in your project
- 478. Program to swap two numbers without using third number
- 479. Why IT?
- 480. What is a pointer

- 
- 481. Different types of searching and sorting techniques
- 

- 482. Tell me about yourself
- 483. Tell me about your project
- 484. 2 puzzles a) with 4 cuts ,cut a circular cake into 12 pieces
  - a. b) a car has 4 tyres with each tyre 4 nuts and 8 bolts
    - i. now bolts of a tyre are lost.how you will run the car

- 485. Program to convert uppercase letter into lower case letter
  - 486. Zener diode, voltage regulator
  - 487. FM and AM
  - 488. Bluetooth,wifi,wimax
  - 489. Who is CEO,CTO,Chairman,founder of TCS
-

- 490. Tell me about yourself
  - 491. Tell me about your project
  - 492. What is call by reference?call by value
  - 493. C program to compare two strings
  - 494. About TCS and why TCS
  - 495. Why an IT company having come from an ECE background
- 

- i. Tell me about yourself

- 496. Tell me about your project
  - 497. RS 232
  - 498. AM and FM uses
  - 499. What is microprocessor and microcontrollers
  - 500. Range of Bluetooth,wifi,radio waves
  - 501. What is a pointer,what is data type,what is a variable
  - 502. Suggestion :don't try to blame the interviewer for the answer you don't know just say  
I don't know.don't feel tensed and be confident
- 

- 503. Difference between microcontroller and microprocessor
  - 504. What is AM and FM?which is not preferable
  - 505. Explain your project
  - 506. Tell me about yourself
  - 507. What is a transmitter
  - 508. Explain about feedback amplifier
  - 509. Explain the block diagram of communication
  - 510. Are you willing to work anywhere in India
- 

- 511. Tell me about TCS
- 512. Tell me about yourself

513. Basic questions on C, JAVA
514. Difference b/w java and C
515. Program related to string insertion and string deletion
516. Mini project and applications of mini project
517. Difference between microcontroller and microprocessor
518. Difference between strcpy() and strdup() functions
- 
519. Tell about yourself?
520. Being a ECE student are you ready to join TCS
521. How IT is useful for farmers
522. Program for printing “apple for A” while the input string is “ A for Apple”\
523. What is the difference between ‘=’ & ‘==’ operators
524. What is the different control statements in C
525. What is difference between while and Do while loops
526. What is the minimum no of executions in while and for loops
527. Tell me about interships.where it is used
- 
528. what is a pointer
529. What do you know about C
530. How many types of loops are there and what are the differences
531. What is structure
532. Range and frequency of Bluetooth,wifi,wimax
533. Tell about yourself
- 
534. They mainly focus on C
535. Program on prime nos
536. Mini project
537. Java basics

538. About TCS
- 
539. Explain Diode and its characteristics,uses
540. Explain switch working
541. About mini project
542. Antenna working
543. About radio waves
544. Amplifier types
545. Diode types
- 
546. Tell about yourself?
547. Lenz's law,RS 232 why zener diode is used
548. What are your favorite subjects
549. About mini project
550. About C
551. Function,task,statement,what is C compiler
552. Tell me the function of Oscillator
- 
553. What is Lenz's law?
554. Differences b/w AM and FM
555. What is a program
556. What is a data type
557. Explain LICA
558. Explain core subjects
559. 555 Timer operation
560. Explain about your project
561. Why TCS?

562. Where you want to see yourself after 5 years

563. What is your long-term goal

564. What is today's date

565. What is voltage regulator(723 IC)

---

566. Difference between microcontroller and microprocessor

567. Difference between analog and digital communications

568. What are C Tokens

569. Difference between C program and data structure

570. Hobbies

571. Family background

572. What is a data type

573. What are multivibrators

574. Paper presentations and poster presentations

575. Internships

---

576. about your project

577. CEO of Wipro

578. Head quarters-WIPRO

579. Dollar value

580. Which type of modulation is most widely used? AM or FM?Why?

581. In Television which modulation is used?

582. Wifi range

583. Bluetooth range

584. Passion about programming

585. What do you want to do learning a programming language

586. Why TCS

587. Interested areas

588. Most of the questions are from communications

---

589. Tell me about Yourself

590. What is the range of Bluetooth,wifi

591. What is zigbee

592. Difference between AM and FM

593. Difference between microcontroller and microprocessor

594. What is C. Difference between C and JAVA.What is Matlab?

595. Full form of MIMI and CMI

596. Define moore's law and lenz's law

# **Human Resources Management**

## **PREVIOUS QUESTION PAPERS:**

1. Tell me about yourself.
2. Why should I hire you?
3. What are your strengths and weaknesses?
4. Why do you want to work at our company?
5. What is the difference between confidence and over confidence?
6. What is the difference between hard work and smart work?
7. How do you feel about working nights and weekends?
8. Can you work under pressure?
9. Are you willing to relocate or travel?
10. What are your goals?
11. What motivates you to do good job?
12. What makes you angry?
13. Give me an example of your creativity.
14. How long would you expect to work for us if hired?
15. Are not you overqualified for this position?
16. Describe your ideal company, location and job.
17. What are your career options right now?
18. Explain how would be an asset to this organization?
19. What are your outside interests?
20. Would you lie for the company?
21. Who has inspired you in your life and why?
22. What was the toughest decision you ever had to make?
23. Have you considered starting your own business?
24. How do you define success and how do you measure up to your own definition?
25. If you won \$10 million lottery, would you still work?
26. Tell me something about our company.
27. How much salary do you expect?
28. Where do you see yourself five years from now?
29. On a scale of one to ten, rate me as an interviewer.
30. Do you have any questions for me?

## **PLACEMENTSCELL :**

31. Why did you resign from your previous job?
32. Why have you been out of work so long?
33. Why have you had so many jobs?
34. Tell me about a situation when your work was criticized.
35. Could you have done better in your last job?
36. Tell me about the most boring job you have ever had.
37. May I contact your present employer for a reference?
38. How many hours a week do you normally work?
39. What was the toughest challenge you have ever faced?
40. Have you been absent from work more than a few days in any previous position?
41. What changes would you make if you came on board?
42. What would you say to your boss if he is crazy about an idea, but you think it stinks?
43. How could you have improved your career progress?
44. Tell me honestly about the strong points and weak points of your boss (company, management team, etc.)
45. Looking back on your last position, have you done your best work?
46. Why should I hire you from the outside when I could promote someone from within?
47. How do you feel about reporting to a younger person?
48. Looking back, what would you do differently in your life?
49. Why are not you earning more money at this stage of your career?

## QUESTIONS FROM ECE STUDENTS

### QUESTIONS ASKED DURING HR INTERVIEW

- 
1. Tell about yourself
  2. Tell about your family
  3. Tell about your hobbies
  4. What is your greatest achievement
  5. What is your favorite colour, why
  6. Why should I hire you
  7. Why only TCS
  8. How can your strengths be applicable for our company
  9. Do you have any location consideration
  10. Do you like Hyderabad? Then how can you leave Hyderabad and come to another place
  11. Two reasons to reject you
  12. Current affairs a) Anna Hazare movement B) Do you support Telangana issue

---

  13. Tell me about yourself
  14. Long term and short term goals
  15. Why TCS
  16. Tell me about your two good qualities
  17. Which is your worst situation
  18. Degradation in percentage from inter to Btech Justify
  19. Can you relocate
  20. Do you know the terms and conditions of TCS

---

  21. Tell me about yourself
  22. Questions from your interest
  23. What have you done so far in your B tech career
  24. About Mini project
  25. What is your favorite subject
  26. Basic questions on your favorite subject
  27. Do you have any knowledge on computer language
  28. About your family and background
  29. What do you want to do in the future
  30. Some managerial questions by giving a situation
  31. Why IT sector when you are into ECE
  32. Extracurricular interests
  33. How did you achieve your merit certification
  34. Have you given any presentation
  35. What sports do you play
  36. Questions on your favourite sport

---

  37. Why TCS
  38. Current affairs US downfall
  39. What is your goal in life
  40. Relocation
  41. Why India is economically growing why not already developed

42. Tell me about yourself
43. Tell me about your family background.
- 
44. How many girl friends you have
45. Tell me about yourself
46. Why TCS and not your core
47. Brief done those many projects in your core will you work with a company like TCS
48. What is ATL
49. Do you know TCS bond
50. Will you work with us for min of 5 years
51. Relocate
- 
52. Tell me about yourself
53. Strengths give me examples
54. Why percentage decreased in B Tech
55. About your hobbies why only those
56. Are you well aware of current IT sector
- 
57. Tell me about yourself
58. Next question is based on the answer I gave to the above question
59. Five tata related companies
60. Tag line of TCS
61. Capitals and states
62. About Sonia Gandhi family
- 
63. Who is your favorite lecturer, why?
64. Describe your bus journey
65. Family background
66. Are you comfortable with relocation
67. Rules and regulations of TCS
- 
68. What will you do if you get the job
69. Tell about your strengths
70. Hobbies
71. Prepare resume effectively
- 
72. Introduce yourself tell about your family background
73. Tell about current affairs
74. Questions asked on hobbies strengths weakness.
75. Why you like BVRIT college. Why you want to join TCS
76. You are electronic student, you must join core company then why TCS
77. Where you are yourself after 5 years
78. Why should I hire you.
79. What you know about TCS
80. Where you rate yourself from 1 to 10
81. What are rules and regulations of TCS. bond of TCS
- 
82. Did you participate in campus fight
83. Why do you like Hyderabad
84. Who is your role model
85. Are you flexible

- 
86. Tell about yourself
- 
87. Why was your aggregate low in the 1<sup>st</sup> year
- 
88. Why did you choose ECE and trying software jobs.
- 
89. What are you all about
- 
90. State capitals
- 
- a. Maha rastra , Orissa, south Africa, srilanka
- 
91. Tell me about your personality.
- 
92. What are your personality
- 
93. Do you have any relocation constraints
- 
94. Terms and conditions of TCS
- 
95. Being an electronic student why did you choose IT field
- 
96. What is your plan immediately after 4<sup>th</sup> year
- 
97. Tell me a quality in you such that the company cannot run without you
- 
98. Tell me 3 reasons why should not I take you
- 
99. Tell me about your family
- 
100. Long term and short term goals
- 
101. Why TCS
- 
102. Tell me about your good qualities
- 
103. Which is your worst situation
- 
104. Degradation in percentage from inter to B tech Justify
- 
105. Can you relocate
- 
106. Do you know the terms and conditions of TCS
- 
107. Why should I hire you
- 
108. Where do you want to see yourself after 5 years
- 
109. Extracurricular activities
- 
- a. Suggestion: Try to take everything in a positive way even though they impose negative questions on you and your behavior.
- 
110. Where are you from
- 
111. What is that place famous for
- 
112. Discussion about native place. Get in with a clean and tension free mind. Only then you can do well.
- 
113. Some questions about my hobbies(Be truthful and prepared while mentioning your hobbies or else you will be caught easily for sure)
- 
114. Tell me one quality in you which would make me feel like without I cannot run TCS
- 
115. Give me three reasons to reject you in this interview(for this be confident and tell sir I have cleared all my previous rounds and I think I performed well even in this round so I don't find any reasons to get rejected sir )
- 
116. You will be asked many stress questions in HR so be cool and confident. Only then you can crack the HR Round. In TR rather than questions from only the interested subject. Questions are asked from all important subjects.
- 
117. TCS branches in Hyderabad
- 
118. Do you know oriya
-

- 119. What is your eamcet rank
- 120. Being ECE student reasons for Opting IT
- 121. Following above question
- 122. Ready to relocate
- 123. Ready to sign the bond
- 124. Family background
- 125. Reasons for rejecting you
- 126. Questions based on the reasons specified

Suggestion: I conduct as many mock interviews as possible to prepare for interview rounds Special care for the improvements of spoken English. Care for development of communication skills.

- 127. Had your breakfast
  - 128. Tell me about yourself
  - 129. Family background
  - 130. Why should I hire you
  - 131. Imagine TCS as a person. justify the person as TCS
  - 132. Who is your best friend
  - 133. What are the qualities in you liked by your best friend
  - 134. What is your aim or dream
  - 135. Given me an example for fast learning
  - 136. Any queries
  - 137. Why do you prefer TCS
  - 138. Session needed for core companies
  - 139. Basic knowledge of EDC is must
  - 140. Field of interest must choose
  - 141. Sessions on microprocessors
  - 142. Networks
  - 143. Session on VHDL
  - 144. Salary expected
  - 145. How are you feeling today?
- 

- 146. How is weather outside?
- 147. Strengths –need a spontaneous answer(prepared answers not accepted),give an example
- 148. Father of Akbar
- 149. Relationships among Gandhi family.
- 150. Recently watched movie->what did you learn from it.
- 151. Y.s jagan issue
- 152. Telangana issue- support 2reason, do not support -2 reasons
- 153. Qualities in a husband and asked to justify my answer
- 154. Where u from:
- 155. Say one moment in your life which has been very interesting for u till now.
- 156. Technical officer of TCS.

- 
157. Why should I like you?  
158. What is your ambition in u r life(not professional)  
159. Actually what u want to become in life.  
160. What are your hobbies  
161. Did you learn any music course  
162. What is your biggest achievement  
163. Will u go anywhere in India  
164. Do u know the terms and conditions of TCS  
165. What r u r interests(other than social services)  
166. Any questions for me  
167. Why only TCS, Why no other company
- 

168. My y experience in HR was ,firstly they called me for HR and the moment I opened the door and asked permission ,he just told me to hold there. After a couple of minutes he said me to enter. After entering the room he said me to sign on the application form .  
169. He told me to take seat and made me stand and told him to move back for 2 times.  
170. Then he made me to sit and asked me about my father and to talk about his profession.  
171. He asked me the openition on JNTU correction .  
172. What r the 3 drawbacks that an IT industry is facing now.  
173. What are the 2 advantages &disadvantages for a student joining your college?  
174. Describe u r personality
- 

175. Eamet rank  
176. Phonetics translation of a word  
177. Are u interested in programming  
178. Are u comfortable with IT  
179. Are u ready to relocate  
180. Do u know the T&C of TCS  
181. Tell me about family background  
182. Hobbies  
183. In which way u r different from others  
184. Any recent movies u had seen and asked to tell the story of the movie
- 

185. What r u all about  
186. State capitals  
187. Maharastr,Orissa,south Africa,srilanka  
188. Do u want to ask any questions
- 

189. Why was u r aggregate low in the 1<sup>st</sup> year  
190. Why did u choose ece and trying for software jobs
- 

191. Did u participate in campus fight

- 
192. Why do u like Hyderabad  
193. Who is u r role model  
194. R u flexible  
195. Tell about u r self
- 

196. About u r home town  
197. Why u choose ece  
198. Why do u want to join in TCS  
199. Which one is important either knowledge or study  
200. Y u hobbies
- 

201. Tell me about u r self  
202. Short term goal  
203. Ambition  
204. What r u r weakness  
205. Hobbies  
206. Capitals  
207. Present dollar value
- 

208. Difference b/w reading for marks And reading for knowledge  
209. 2.Do u read for marks or knowledge  
210. 3 .Tell me about Anna hazare movement  
211. 4.Who Is the governor of A.P  
212. 5.Tell about kiran kumar reddy(c.m)  
213. 6.capital city of manipal  
214. 7.Where do see your self after 10 years  
215. 8.Why india called sub-continent
- 

216. About your self &what do u know about the company  
217. About capital cities  
218. Why shoud I hire u  
219. About strengths and weakness  
220. General knowledge questions  
221. Tell me a film story  
222. Making of biryani
- 

223. Tell about u r self  
224. Family background  
225. How u r college different from others
- 
226. Tell me about yourself  
227. Narrate a story  
228. What will u do if u become the principal of u r college  
229. What will u do if u become the chief minister of ourstate  
230. Do u support telangana and why  
231. Family background
-

- 
232. What r u r weaknesses  
233. why do u want to bvrif  
234. Tell about u r family background  
235. 4 .Ready to relocate  
236. What r the major It challenges faced today  
237. What is u r father occupation
- 
238. What makes u special  
239. You are favorite cricketer  
240. A movie u have watched  
241. U after 2 years  
242. Countries –capitals
- 
243. Personality,area of interest, weakness  
244. Puzzles,problem solving skills→example  
245. Geometrical constraints, rules of TCS about bond  
246. How do u rate you self for problem solving, skills, attitude, c oding part  
247. Analytical part coding part which is important. how do you rate them  
248. If u face any problem, t hen how do u solve it after getting into our company
- 
249. Tell me about the movie which u saw and explain at and the message from that movie  
250. States and capitals  
251. Tell me about u r self which is other than in the resume  
252. Tell me about u r family background  
253. Hobbies  
254. Are u go any part of the country as a part of u r job  
255. How u r adaptable to the surroundings  
256. Gandhi family Grand mother of rahul Gandhi
- 
257. About back ground  
258. Without asking about c ,he himself declares that we don't have any idea about c  
259. What will u do in IT industry  
260. Why do u prefer software
- 
261. Tell me about yourself  
262. Do u support Telangana  
263. About lokpal bill  
264. Capitals and states  
265. Stories  
266. What u have observed in this room after entering  
267. 7 .Examples for u r strengths  
268. General knowledge
- 
269. Where u from

270. Where have you been to  
 271. How is delhi  
 272. Why delhi is our capital city,why not Mumbai,explain/support  
 273. Apart from IT professional work what r u interested in  
 274. How can u say that  
 275. Every body is saying the same that they participated in so and so,what is so special in u.  
 276. Who r the people u working with
- 
277. Tell me about yourself  
 278. What is yours area area of interest  
 279. 3.Area of interest other than technical  
 280. 4.whether u have faced any challenges in this present academics  
 281. 5.They will ask about you recent or current curriculum activities or any cause if u have  
 282. 6.Tell me why you lost your grade is B.Tech
- 
283. What is your favourite color,why  
 284. Why shoud I hire u  
 285. Why only TCS  
 286. How can u r strengths be applicable for our company  
 287. Do you have any location consideration  
 288. Do u like Hyderabad,Then how can u leave hyd and come to another place  
 289. Two reasons to reject you  
 290. Current affairs  
 291. Anna hazare movement,do u support telanga issue.
- 
292. 1.who is u r best friend ,how did u meet her.Tell about her  
 293. 2.Describe one funniest movement in u r life  
 294. 3.Appart from professional ,what is u r aim in u r life  
 295. 4.What is u r greatestdesire  
 296. 5.Do u have any enemies if so do u hate her  
 297. 6.Are u aware of TCS trms and cond's.  
 298. 7.after 10 years where will u be  
 299. 8.Will u relocate  
 300. 9.Which is u r favorite movie you have recently watched  
 301. 10.what message did u take from it  
 302. 11.What will u do when u r with u r friends
- 
303. Where r u from  
 304. Which city u like more  
 305. Why that city  
 306. Who is u r inspiration  
 307. What do want to become in future  
 308. How will u cope when u r re-allocate at a remote place  
 309. Are u ok with relocation  
 310. R u aware of bond with TCS  
 311. CEO of company  
 312. Capitals of states
-

313. 1.family background  
 314. 2.greetings and body language are essential please note
- 
- a. Tell about yourself  
 315. Tell about your family  
 316. Tell about your hobbies  
 317. What is your greatest achievement
- 
318. What is your favorite colour, why  
 319. Why should I hire you  
 320. Why only TCS  
 321. How can your strengths be applicable for our company  
 322. Do you have any location consideration  
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 330. Which is your worst situation  
 331. Degradation in percentage from inter to Btech Justify  
 332. Can you relocate  
 333. Do you know the terms and conditions of TCS
- 
334. Tell me about yourself  
 335. Questions from your interest  
 336. What have you done so far in your B tech career  
 337. About Mini project  
 338. What is your favorite subject  
 339. Basic questions on your favorite subject  
 340. Do you have any knowledge on computer language  
 341. About your family and background  
 342. What do you want to do in the future  
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 344. Why IT sector when you are into ECE  
 345. Extracurricular interests  
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 347. Have you given any presentation  
 348. What sports do you play  
 349. Questions on your favorite sport
- 
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366. Strengths give me examples  
367. Why percentage decreased in B Tech  
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371. Next question is based on the answer I gave to the above question  
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373. Tag line of TCS  
374. Capitals and states  
375. About Sonia Gandhi family
- 

376. Who is your favorite lecturer, why?  
377. Describe your bus journey  
378. Family background  
379. Are you comfortable with relocation  
380. Rules and regulations of TCS
- 

381. What will you do if you get the job  
382. Tell about your strengths  
383. Hobbies  
384. Prepare resume effectively
- 

385. Introduce yourself tell about your family background  
386. Tell about current affairs  
387. Questions asked on hobbies strengths weakness.  
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389. You are electronic student, you must join core company then why TCS  
390. Where you are yourself after 5 years

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391. Why should I hire you.  
392. What you know about TCS  
393. Where you rate yourself from 1 to 10  
394. What are rules and regulations of TCS. bond of TCS
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395. Did you participate in campus fight  
396. Why do you like Hyderabad  
397. Who is your role model  
398. Are you flexible  
399. Tell about yourself
- 
400. Why was your aggregate low in the 1<sup>st</sup> year  
401. Why did you choose ECE and trying software jobs.  
402. What are you all about  
403. State capitals  
404. Maha rashtra , Orissa, south Africa, srilanka  
405. Tell me about your personality.  
406. What are your personality  
407. Do you have any relocation constraints  
408. Terms and conditions of TCS  
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- 

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- 

413. Tell me about your family  
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426. What is that place famous for  
427. Discussion about native place. Get in with a clean and tension free mind. Only then you can do well.  
428. Some questions about my hobbies(Be truthful and prepared while mentioning your hobbies or else you will be caught easily for sure)

429. Tell me one quality in you which would make me feel like without I cannot run TCS
430. Give me three reasons to reject you in this interview(for this be confident and tell sir I have cleared all my previous rounds and I think I performed well even in this round so I don't find any reasons to get rejected sir )
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432. TCS branches in Hyderabad
433. Do you know oriya
- 

434. What is your eamcet rank
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436. Following above question
437. Ready to relocate
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439. Family background
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442. Suggestion: I conduct as many mock interviews as possible to prepare for interview rounds Special care for the improvements of spoken English. Care for development of communication skills.
- 

443. ad your breakfast
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449. What are the qualities in you liked by your best friend
450. What is your aim or dream
451. Given me an example for fast learning
452. Any queries
453. Why do you prefer TCS
454. Session needed for core companies
455. Basic knowledge of EDC is must
456. Field of interest must choose
457. Sessions on microprocessors
458. Networks
459. Session on VHDL
460. Salary expected
- 

461. How are you feeling today?
462. How is weather outside?
463. Strengths –need a spontaneous answer(prepared answers not accepted),give an example
464. Father of Akbar

- 
465. Relationships among Gandhi family.  
466. Recently watched movie->what did you learn from it.  
467. Y.s jagan issue  
468. Telangana issue- support 2reason, do not support -2 reasons  
469. Qualities in a husband and asked to justify my answer
- 

470. Where u from  
471. Say one moment in your life which has been very interesting for u till now.  
472. Technical officer of TCS.  
473. Why should I like you?  
474. What is your ambition in u r life(not professional)  
475. Actually what u want to become in life.  
476. What are your hobbies  
477. Did you learn any music course  
478. What is your biggest achievement  
479. Will u go anywhere in India  
480. Do u know the terms and conditions of TCS  
481. What r u r interests(other than social services)  
482. Any questions for me  
483. Why only TCS, Why no other company
- 
484. My y experience in HR was ,firstly they called me for HR and the moment I opened the door and asked permission ,he just told me to hold there. After a couple of minutes he said me to enter. After entering the room he said me to sign on the application form .
485. He told me to take seat and made me stand and told him to move back for 2 times.
486. Then he made me to sit and asked me about my father and to talk about his profession.
487. He asked me the openition on JNTU correction .
488. What r the 3 drawbacks that an IT industry is facing now.
489. What are the 2 advantages &disadvantages for a student joining your college?
- 

490. Describe u r personality  
491. Eamet rank  
492. Phonetics translation of a word  
493. Are u interested in programming  
494. Are u comfortable with IT  
495. Are u ready to relocate  
496. Do u know the T&C of TCS
- 

497. Tell me about family background  
498. Hobbies  
499. In which way u r different from others  
500. Any recent movies u had seen and asked to tell the story of the movie
-

- 
501. What r u all about  
502. State capitals  
503. Maharastr,Orissa,south Africa,srilanka  
504. Do u want to ask any questions
- 

505. Why was u r aggregate low in the 1<sup>st</sup> year  
506. Why did u choose ece and trying for software jobs  
507. Did u participate in campus fight  
508. Why do u like Hyderabad  
509. Who is u r role model  
510. R u flexible  
511. Tell about u r self
- 

512. About u r home town  
513. Why u choose ece  
514. Why do u want to join in TCS  
515. Which one is important either knowledge or study  
516. Y u hobbies
- 

517. Tell me about u r self  
518. Short term goal  
519. Ambition  
520. What r u r weakness  
521. Hobbies  
522. Capitals  
523. Present dollar value
- 

- a. 1Difference b/w reading for marks And reading for knowledge
  - b. 2.Do u read for marks or knowledge
  - c. 3 .Tell me about Anna hazare movement
  - d. 4.Who Is the governor of A.P
  - e. 5.Tell about kiran kumar reddy(c.m)
  - f. 6.capital city of manipal
  - g. 7.Where do see your self after 10 years
  - h. 8.Why india called sub-continent
- 

524. About your self &what do u know about the company  
525. About capital cities  
526. Why shoud I hire u  
527. About strengths and weakness  
528. General knowledge questions  
529. Tell me a film story

- 
530. Making of biryani
531. Tell about u r self
532. Family background
533. How u r college different from others
- 
534. Tell me about yourself
535. Narrate a story
536. What will u do if u become the principal of u r college
537. What will u do if u become the chief minister of our state
538. Do u support telangana and why
539. Family background
- 
- a. 1.What r u r weaknesses
- b. 2.why do u want to b vrit
- c. 3.Tell about u r family background
- d. 4.Ready to relocate
- e. 5.What r the major It challenges faced today
- f. 6.What is u r father occupation
- 
540. What makes u special
541. You are favorite cricketer
542. A movie u have watched
543. U after 2 years
544. Countries –capitals
- 
- a. 1.Personality,area of interest, weakness
- b. 2.Puzzles,problem solving skills→example
- c. 3.Geometrical constraints, rules of TCS about bond
- d. 4.How do u rate you self for problem solving, skills, attitude, coding part
- e. 5.Analytical part coding part which is important. how do you rate them
- f. 6.If u face any problem, then how do u solve it after getting into our company
- 
545. Tell me about the movie which u saw and explain at and the message from that movie
546. States and capitals
547. Tell me about u r self which is other than in the resume
548. Tell me about u r family background
549. Hobbies
550. Are u go any part of the country as a part of u r job
551. How u r adaptable to the surroundings
552. Gandhi family Grand mother of rahul Gandhi
- 
- 1.About back ground
- 2.Without asking about c ,he himself declares that we don't have any idea about c
- 3.What will u do in IT industry
- 4.Why do u prefer software
- 1.Tell me about yourself

- 
- 2.Do u support Telangana
  - 3.About lokpal bill
  - 4.Capitals and states
  - 5.Stories
  - 6.What u have observed in this room after entering
  - 7.Examples for u r strengths
  - 8.General knowledge
- 

- 553. Where u from
  - 554. Where have you been to
  - 555. How is delhi
  - 556. Why delhi is our capital city,why not Mumbai,explain/support
  - 557. Apart from IT professional work what r u interested in
  - 558. How can u say that
  - 559. Every body is saying the same that they participated in so and so,what is so special in u.
  - 560. Who r the people u working with
- 
- 561. Tell me about yourself
  - 562. What is yours area area of interest
  - 563. 3.Area of interest other than technical
  - 564. 4.whether u have faced any challenges in this present academics
  - 565. 5.They will ask about you recent or current curriculum activities or any cause if u have
    - 566. 6.Tell me why you lost your grade is B.Tech
- 
- 567. What is your favourite color,why
  - 568. Why shoud I hire u
  - 569. Why only TCS
  - 570. How can u r strengths be applicable for our company
  - 571. Do you have any location consideration
  - 572. Do u like Hyderabad,Then how can u leave hyd and come to another place
  - 573. Two reasons to reject you
  - 574. Current affairs
  - 575. Anna hazare movement,do u support telanga issue.
- 
- 576. 1.who is u r best friend ,how did u meet her.Tell about her
  - 577. 2.Describe one funniest movement in u r life
  - 578. 3.Appart from professional ,what is u r aim in u r life
  - 579. 4.What is u r greatestdesire
  - 580. 5.Do u have any enemies if so do u hate her
  - 581. 6.Are u aware of TCS trms and cond's.
  - 582. 7.after 10 years where will u be
  - 583. 8.Will u relocate
  - 584. 9.Which is u r favorite movie you have recently watched
  - 585. 10.what message did u take from it
  - 586. 11.What will u do when u r with u r friends
-

- 
587. Where r u from  
588. Which city u like more  
589. Why that city  
590. Who is u r inspiration  
591. What do want to become in future  
592. How will u cope when u r re-allocate at a remote place  
593. Are u ok with relocation  
594. R u aware of bond with TCS  
595. CEO of company  
596. Capitals of states
- 

- a. 1.family background  
b. 2.greetings and body language are essential please note
- 

597. TCS Placements HR questions  
598. Tell about yourself  
599. Tell about your family  
600. Tell about your hobbies  
601. What is your greatest achievement
- 

602. What is your favorite colour, why  
603. Why should I hire you  
604. Why only TCS  
605. How can your strengths be applicable for our company  
606. Do you have any location consideration  
607. Do you like Hyderabad? Then how can you leave Hyderabad and come to another place  
608. Two reasons to reject you  
609. Current affairs a) anna Hazare movement B) Do you support Telangana issue
- 

610. Tell me about yourself  
611. Long term and short term goals  
612. Why TCS  
613. Tell me about your two good qualities  
614. Which is your worst situation  
615. Degradation in percentage from inter to Btech Justify  
616. Can you relocate  
617. Do you know the terms and conditions of TCS
- 

618. Tell me about yourself  
619. Questions from your interest  
620. What have you done so far in your B tech career  
621. About Mini project

622. What is your favorite subject  
623. Basic questions on your favorite subject  
624. Do you have any knowledge on computer language  
625. About your family and background  
626. What do you want to do in the future  
627. Some managerial questions by giving a situation  
628. Why IT sector when you're into ECE  
629. Extracurricular interests  
630. How did you achieve your merit certification  
631. Have you given any presentation  
632. What sports do you play  
633. Questions on your favorite sport
- 

634. Why TCS  
635. Current affairs US downfall  
636. What is your goal in life  
637. Relocation  
638. Why India is economically growing why not already developed  
639. Tell me about yourself  
640. Tell me about your family background.
- 

641. How many girl friends you have  
642. Tell me about yourself  
643. Why TCS and not your core  
644. Brief done those many projects in your core will you work with a company like  
TCS  
645. What is ATL  
646. Do you know TCS bond  
647. Will you work with us for min of 5 years  
648. Relocate
- 

649. Tell me about yourself  
650. Strengths give me examples  
651. Why percentage decreased in B Tech  
652. About your hobbies why only those  
653. Are you well aware of current IT sector
- 

654. Tell me about yourself  
655. Next question is based on the answer I gave to the above question  
656. Five Tata related companies  
657. Tag line of TCS  
658. Capitals and states

659. About Sonia Gandhi family

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- 660. Who is your favorite lecturer, why?
  - 661. Describe your bus journey
  - 662. Family background
  - 663. Are you comfortable with relocation
  - 664. Rules and regulations of TCS
- 

- 665. What will you do if you get the job
  - 666. Tell about your strengths
  - 667. Hobbies
  - 668. Prepare resume effectively
- 

- 669. Introduce yourself tell about your family background
  - 670. Tell about current affairs
  - 671. Questions asked on hobbies strengths weakness.
  - 672. Why you like BVRIT college. Why you want to join TCS
  - 673. You are electronic student, you must join core company then why TCS
  - 674. Where you are yourself after 5 years
  - 675. Why should I hire you.
  - 676. What you know about TCS
  - 677. Where you rate yourself from 1 to 10
  - 678. What are rules and regulations of TCS. bond of TCS
- 

- 679. Did you participate in campus fight
  - 680. Why do you like Hyderabad
  - 681. Who is your role model
  - 682. Are you flexible
  - 683. Tell about yourself
- 

- 684. Why was your aggregate low in the 1<sup>st</sup> year
  - 685. Why did you choose ECE and trying software jobs.
- 

- 686. What are you all about
  - 687. State capitals
    - a. Maha rastra , Orissa, south Africa, srilanka
-

688. Tell me about your personality.  
689. What are your personality  
690. Do you have any relocation constraints  
691. Terms and conditions of TCS  
692. Being an electronic student why did you choose IT field
- 

693. What is your plan immediately after 4<sup>th</sup> year  
694. Tell me a quality in you such that the company cannot run without you  
695. Tell me 3 reasons why should not I take you
- 

696. Tell me about your family  
697. Long term and short term goals  
698. Why TCS  
699. Tell me about your good qualities  
700. Which is your worst situation  
701. Degradation in percentage from inter to B tech Justify  
702. Can you relocate  
703. Do you know the terms and conditions of TCS  
704. Why should I hire you  
705. Where do you want to see yourself after 5 years  
706. Extracurricular activities

- a. Suggestion: Try to take everything in a positive way even though they impose negative questions on you and your behavior.
707. Where are you from  
708. What is that place famous for  
709. Discussion about native place. Get in with a clean and tension free mind. Only then you can do well.
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733. Any queries  
734. Why do you prefer TCS  
735. Session needed for core companies  
736. Basic knowledge of EDC is must  
737. Field of interest must choose  
738. Sessions on microprocessors  
739. Networks  
740. Session on VHDL  
741. Salary expected

### **Students feedback:**

1)

Dear Sir,

The written part for the TCS was made easy by the patterns given by Productivity Reach people as all the questions came from those models only. Coming to the interview process, it was of two rounds. Technical and HR rounds. The difficulty level of the technical round depended on the panel into which one went. Mine was panel 8 where the panelist was asking two questions every minute . I think he was looking at the spontaneity of the answers rather than the content of the answer. He was also kind enough to tell outright if we proceeded to HR round then and there. In general, people were asked on basics of the core subjects and a little in depth on the three or two interested core subjects selected by the students. Some panelists also asked questions based on the mini-projects we did and judged the knowledge on the project we did. Coming to the HR round, i was placed in panel 14 as my HR round was on the first day itself. HR panelists concentrated more on the body language and the presentation skills of the students. Some students were subjected to stress interviews to judge their stress handling capabilities, but most of the students faced normal HR rounds where they were asked simple questions like "What are your future plans" , "Where is your native and tell something about your native place" etc. They checked the confidence levels and their fluency in the language perhaps. The thinking direction of the students were also looked at. In short the interview process aimed at picking out the students who were confident about themselves and would fit into TCS' bill.

That was my feedback sir.

ThankYou

BLPatnaik@31

2)

Name of student: R.PRAMITHA

Reg no:08211A0474

a)Feedback on aptitude test

It was good.Clearing the aptitude after the productivity reach's training program is so easy.

b)Feedback on technical interview:

It was good and the TR was very friendly.We just need to prepare everything about project,c and then favourite subject.We have to be strong in these basics.Its very easy to clear this round.I was asked to write truth tables for nor and xor gates and some basics of c and about project.

c)Feedback on HR Round:

It was great. Leadership qualities are checked during my HR.We need to have knowledge about the current happenings.

3 )NAME : N. THEERDHA SAGAR

REG NO : 08211A04C0

#### FEEDBACK :

1. 70 Patterns for TCS is more than enough for tcs aptitude round. One can be confident enough if prepared with these patterns.
2. For technical round stick to c-basics(basic programs like swapping ,difference b/w while and do while, difference b/w linked list and array), basics of EDC,STLD(logic gates and their truth tables) .
3. Most important for technical round \* - one must have depth knowledge on his/her miniproject done like its applications, what made you to select the project? technical details, circuit components and its functioning .
4. Human resource round (H.R)- tell me about yourself. ( details regarding schooling, family background , intermediate , your achievements/strengths , projects/interns done). Have a completed knowledge about your resume. It's a round where your communication skills were checked , never panic in front of HR ( be confident about what you talk and never try to fake or give false statements ) .

4)NAME : P.V.VIKAS

REG NO : 08211A04C4

#### APTITUDE TOPICS :

- a. ratios and proportions
- b. probability
- c. mixtures and allegations
- d. geometry
- e. problems related to cubes , distance and time , averages
- f. statistics
- g. bar graph , pie charts
- h. permutations and combinations

#### TECHNICAL ROUND

- The first question asked was tell me about yourself and then about the mini project
- The subjects covered are
  1. EDC(diode ,transistor ,and all basic concepts)
  2. STLD(logic gates)
  3. COMMUNICATIONS(basics of analog and digital communications)

4. MICROPROCESSORS AND MICROCONTROLLERS(difference between microcontroller and microprocessor)
5. C AND DATA STRUCTURES (all basic programs and all basic concepts of data structures)

#### H.R ROUND

1. Completely it's like a stress interview.
2. Questions on Extra Curricular Activities that I have done Other then academics.
3. Hobbies and questions on areas of interest
4. Managerial round-a situation will be given, you are asked to manage the situation as a Manager.

## References:

- A. Productive reach, other universities & Websites
- B. placement cell
- C. . Students faced interview