

DELHI PUBLIC SCHOOL, BHILAI
FIRST TERMINAL EXAMINATION-2015

CLASS-XII

MAX. MARKS 100

ENGLISH CORE

TIME ALLOWED:3 hrs

General Instructions:

1. This paper is divided into three sections: A, B and C. All the sections are compulsory.
2. Separate instructions are given with each section and question, wherever necessary. Read these instructions carefully and follow them carefully.
3. Do not exceed the prescribed word limit while answering the questions.

Section – A (Reading Unseen Passages and Note-making)

1. Read the following passage carefully and answer the questions that follow:

(1x12=12)

- a. My first tryst with Shakespeare several years ago was an enforced one. The Merchant of Venice was a prescribed book in class 9 when I was at school. I had read the wonderful 'Lamb's Tales from Shakespeare' and considered myself an authority on the stories. I did not think it necessary to read the antiquated language or trudge through several seemingly abstruse paragraphs to get to the main point. To spend a whole year to decipher a play when I had understood the story in a few pages seemed to be a sheer waste of time. Yet, somewhere along the way, I was drawn into the world of the Merchants of Venice, their portly argosies, the signors and rich burghers and the news on the Rialto. The language yielded its riches slowly, the characters became well drawn, more rounded and the impassioned speeches of Shylock and Portia stirred up a flurry of unexamined questions. Since then, I have read several other plays, have seen a couple of theatrical performances and watched young Leonardo Di Caprio in a modern Romeo and Juliet film, Shakespeare has been around.
- b. Shakespeare has shaped the writing and storytelling in the English language like no other writer has. He liberally borrowed, bent and brought new words into the English language from addiction, bump critic to worthless and zany. The phrases that he coined roll off our tongues as over-used adages – All that glitters is not gold (The Merchant of Venice), Jealousy is a green-eyed monster (Othello), and the perennial 'All is well that ends well.' He has influenced several writers and been quoted by many of them. One of my favourite authors PG Wodehouse had the odd Shakespearean phrase popping up in whacky situations like the 'milk of human kindness' sloshing inside someone or references to Banquo and Macbeth explained to Bertie by the estimable Jeeves who knew his Shakespeare. The plays have been translated into most languages including several regional Indian bhashas. They have lent themselves to film adaptations including Vishal Bharadwaj's Maqbool (Macbeth) and Omkara (Othello)
- c. The tragedies and comedies of Shakespeare cover every possible theme and idea – love, greed, jealousy, racism, friendship, mistaken identities, murder, mutiny, politics, feminism and revenge. Like any other celebrity, he has been the subject of speculation and controversy. There have been several conspiracy theories afloat on the 'real' authorship of the plays including a recent claim by a professor in Sicily that Shakespeare was actually an Italian. Despite everything, Shakespeare's appeal is universal, the stories transcend language and nationalities. However more than 400 years after Shakespeare's birth I can't help wondering if anyone will read his works in the days to come.
- d. The average attention span in front of a television channel is about 4 seconds before flicking on the remote to move to another. It is perfectly acceptable to massacre the rules of grammar and syntax. When you can tell a whole story in 140 characters, reading 14 sentences can be a chore. Who will have the desire or patience to dredge up the treasures that lie within?
- e. Shakespeare's works have proved to be sturdy, unshakable through the centuries, moving with the times, lending themselves to newer forms. I hope they don't get relegated to a few diehard literature students or musty libraries. Who knows, we might yet have a different form of Shakespeare that will appeal to the GenNext, a form that will induce them to approach an original play with a sense of anticipation, of beginning a quest to understand and appreciate a good story, well told.
Nothing of him that does fade,
But doth suffer a sea-change
Into something rich and strange.

- 1.1 On the basis of your reading of the passage, answer the following questions by choosing the best of the given choices.
 - (a) The writer considered himself an authority on Shakespeare after reading
 - i. The Merchant of Venice
 - ii. Romeo and Juliet

- iii. Lamb's Tales
- iv. Leonardo Di Caprio
- (b) The best known Shakespearean quote is
 - i. All that glitters is not gold
 - ii. All is well that ends well
 - iii. Jealousy is a green-eyed monster
 - iv. Milk of human kindness
- (c) The claim of the Italian professor from Sicily was
 - i. Shakespeare was an Italian
 - ii. that he covers every possible theme and idea
 - iii. that there have been several conspiracy theories.
 - iv. Shakespeare was a subject to speculation
- (d) The passage ends on a note of
 - i. sadness
 - ii. doubt
 - iii. hope
 - iv. surprise

1.2 Answer the following questions briefly.

- a) Why was the author's first tryst with Shakespeare an enforced one?
- b) What did the author like about the play after reading it thoroughly?
- c) What is Shakespeare's contribution to shaping the English language?
- d) What according to the writer, will make GenNext read Shakespeare?
- e) What was the speculation of the author about the GenNext?
- f) Which Shakespearean phrase was often used by P.G. Wodehouse in his novels?

1.3 Find words from the passage which mean the same as:

- a) Go beyond the range. (Para c)
- b) Persuade or influence. (Para e)
- 2. Read the following passage carefully
 - a. Brazil's famed yellow football jersey belongs to the most romantic idea from the world of sport. Brazil's famed football team first wore their yellow shirts, blue shorts and white stockings on March 14, 1954, at Rio's Maracana Stadium. The match against Chile was won by the team in a 2-0 victory. The uniform that was born that day continues to hold sway and has assumed mythical hues over the sixty year period of its use and has gripped the world's imagination in ways unimaginable. The shirt and its harmonious colours is synonymous with boldness glamour and beauty in the game. A fleeting image of Zico in this torn yellow shirt from the 1982 World Cup, never fails to get the heartbeat of football fans racing around the world.
 - b. Yet like CheGuvera's famous mural, you could argue that Brazil's yellow shirt today is more ubiquitous than it needs to be. The goose bumps that every spectator felt when Brazil came on the field has been considerably eroded with copies of the shirt piled on store shelves around the world. The present generation would hardly comprehend what went into creating the initial euphoria behind the yellow shirts.
 - c. It was a young nation in 1950, when Brazil has faced defeat at the hands of a tiny yet plucky Uruguay on their own home ground. The young nation was plunged into a crisis of confidence after the defeat which they had never conceived as possible. In the 1950 final, Brazil had been over confident and thus were humbled in their own lair. The episode has come to be known simply as The Defeat. Then as reasons for their catastrophe were being exhumed; it was felt that their uniform, which had consisted of white shirts with blue collars, had suffered from a psychological lack of symbolism.
 - d. Search was on in the days leading up to the 1954 World Cup for a new strip that would come in handy. The Rio newspaper *Correlo Da Manha* commissioned an open contest for designing the team's shirts, using the national flag's colours. The 19 year old illustrator, Gracia Schlee, beat 300 other entries to win the contest. By a strange twist, Schlee was an ardent supporter of the Uruguayan team! Hailing from the small town of Montevideo, he had definite leanings for the side. Even his palette for colours did not strictly follow the flag's tints. Instead of the flag's skyblue, he substituted it with cobalt blue for the shorts. in any case, the uniform gave a predominantly yellow distinction and the authorities happily adopted it for the Brazilian football team.
 - e. Sixty years on, the uniform continues to be the most enduring symbol of their culture and football. For the forthcoming 2014 World Cup the kit designers have collaborated with the Rio-based designer and artist Bruno Big, to come up with a strip that will combine tradition with modernity. It will feature a small yellow canary motif representing Canarinho the nickname given to the team when they wear their yellow home jersey.
 - f. In the changes made to the yellow shirt design the unique creativity of Brazil will be visible through motifs that reflect the country's unique and distinct cultures, while staying on board with the yellow. The Brazilian crest too, has been updated. A gold coloured metallic weave has been added for the shimmering effect and overall, the crest has been made slightly larger. Behind the crest, there is a printed slogan that reads: Nascido para jogarfutebol- which in Brazilain tongue means 'Born to Play Football' Sixty years on the saying still holds water.

4. You are the General Manager of Ace Software Solutions, New Delhi. You need a software engineer for your organisation. Draft an advertisement in not more than 50 words to be published in 'The Times of India', inventing all necessary details. (4)

You are a social activist working with the non-government organisation, 'The Environment Conservors'. Design a poster to observe 'Wild Life Protection Week' in your city highlighting the need to protect wildlife, given the fact that some species are nearing extinction. (50 words)

SECTION - B (Writing Skills)

3. Read the following passage carefully and answer the questions:

a. Every living creature has a time machine that regulates activities. It tells man or animal when to wake up, when to sleep, when to slow down physiological activities, regulating the body temperature and release of specific hormones at the proper time. A few call it biological clock while others refer to it as circadian (circa-about; day-day) clock. Its study is known as chronobiology.

b. The human body completes its cycle over a period of 24 hours. In the normal circumstances state because the clock is always influenced by the time cues in the environment.

c. These cues, called "Zeitgeber" (a German word meaning "time givers"), synchronize the clock with the daily solar cycle. Daylight, physical activity, diet and social behavior are the well known zeitgebers. How they influence the clock is still unknown, but it is certain that all the cues are interdependent. For example, regular cycle of sleep and activity affects the time we eat, social interaction and even exposure to daylight.

d. To prove that humans possess an internal, self-sustaining clock and do not simply adjust their behaviour in response to environmental time cues, it was essential to create a "time-free" environment. The first experiments of this kind were carried out in the late 1970s and early 1980s by groups in Europe and the US. During the experiment, which continued for months, the subjects choose when to eat and sleep, but no information is given about time – no TV, no radio, no social contacts and no clock. It soon emerged that subjects placed in such an environment slip into random habits but maintain a routine, powerful evidence for the existence of an internal body clock in men. All of the subjects in the experiments, regardless of whether they were body clockers or not, soon emerge from their clock is set according to the exams as it disturbs the reason that our body clock starts at the regular time to have optimum performance during the exams. If we are regular and keep our routine under check we hardly need reminders for metabolism. The 24-hr body clock should start at the regular time to have optimum performance during the exams. On the basis of your reading of the clock for our lunch, dinner or other times.

e. Every person to an alarm clock fitted in the mind. Give it a try. Think and set the time in your brain before you go off to sleep. To your assignment your brain will transmit signals and you will wake up at the required time. Youassigment your brain will transmit signals and in your person to an alarm clock fitted in the mind. Give it a try. Think and set the time before you go off to sleep. To your assignment your brain will transmit signals and you will wake up at the required time.

Write a summary of the above passage in about 80 words. (5+3=8)

- 2.1 On the basis of your reading of the passage, answer the following questions by choosing the best of the given choices.

a. Brazil's football colours were first worn.....
 (i) at Maracana Stadium on 14 March 1954 (ii) in Uruguay in 1950
 (iii) in the 1982 World Cup (iv) in the 2014 World Cup

b. The earlier uniform of the Brazilian football team was.....
 (i) white shirts and blue pants (ii) white shirts with a strip of modernity
 (iii) white shirts with blue collars (iv) with the symbol 'Camarinho' written on it

2.2 Answer the following questions briefly:

(a) What added extra zest to the 1982 victory, for Zico fans?
 (b) What will the present generation not be able to comprehend?
 (c) Who is Gareca Schieer?
 (d) What is the slogan of the newly designed Brazilian team's uniform?
 (e) What is the yellow shirt synonymous with?
 (f) What does the term 'The Defeat' relate to?

2.3 Find the words from the passage which means the same as:

(a) renovated (Para a)
 (b) lasting for a long time (Para e)

5. You are Renu of 334, Kirtinagar Hyderabad. You came across an advertisement concerning education abroad.

The BTN Sussex University in collaboration with its Indian counterpart offers the first year of study in India and three subsequent years in the U.K

You joined the course. Despite having spent a substantial amount, you haven't been able to proceed for your studies to the U.K. Write a letter to the editor of a newspaper drawing the attention of the public and the education authorities to such advertisements which befool students. Suggest measures which could be taken against such unscrupulous vendors of education.

Or (120 – 150 words) (6)

Army Public School plans to buy computers and computer accessories from ABC computers NaiSarak. Delhi. As Anand/Anandi Prakash, computer laboratory Incharge, draft a letter placing an order, giving all the specifications of the products and quantity required.

6. 22 July 2015 was observed as International Yoga Day, highlighting the fact that regular practice of yoga can help in maintaining good health and even in the prevention of many ailments. Write a speech to be delivered in the morning assembly of your school on the benefits of yoga.

Or (150 – 200 words) (10)

You are very impressed by the P.M's Swacch Bharat Abhiyaan. You decide to launch a campaign to spread awareness amongst the students to keep their surroundings (locality where they stay) clean. Prepare a speech to be given in the Morning Assembly on 'Clean India, Healthy India'

7. Recently you got a chance to participate in a week long workshop on 'Energy Conservation' By the end of the workshop, you were greatly enlightened about the need and ways of conserving energy. Write an article on 'Energy conservation, the need of the hour.' You are Amrit/Amrita of Sarvodaya Vidyalaya, Kanpur.

Or (150-200 words) (10)

A large scale examination cheating scam was exposed recently, where friends and family of class X students taking the state Board exams were caught climbing the school building walls to pass chits to students inside. The government is helpless to stop such dishonest practices unless parents and students cooperate for the same. Present your views in an article throwing light on such malpractices, reasons behind them and the preventive measures that can be taken. You may take help from the clues given

Lack of values & parental guidance, lack of security measures, improved standards of teaching, guidance & counselling for students, strict monitoring of examination centres, strict legal action.

SECTION-C- (Literature Text Books and Long Reading Text)

8. Read the extract given below and answer the questions that follow

What I want should not be confused with total inactivity.

Life is what it is about;

I want no truck with death

If we were not so single-minded

about keeping our lives moving

and for once could do nothing

perhaps a huge silence might interrupt this sadness.

a. What does the poet want? (1)

b. What should it not be confused with? (1)

c. Explain 'I want no truck with death'. (1)

d. What do people pursue single-mindedly? (1)

Or

Far far from gusty waves these

Children's faces

Like rootless weeds, the hair torn,

around their pallor:

The tall girl with her weighed

down head.

The paper seeming boy, with rat's eyes.

(a) Why is the head of the girl weighed down? (1)

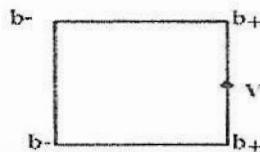
(b) Explain 'the paper seeming boy with rat's eyes'. (1)

- (e) Give an example for a metaphor and simile from this stanza. (1)
- (d) Name the poem and the poet. (1)
9. Answer any four of the following in 30-40 words each: (3x4=12)
- a. "On the way down I planned," remarks Douglas, What did he plan and how far did he succeed?
- b. How did M. Hamel behave as the last lesson came to an end?
- c. Describe the world inside the car and compare it with the activities taking place outside, with reference to 'My Mother at sixty six'.
- d. According to the poet what lesson can the Earth teach us?
- e. What was the basic tale underlying each story Jack told his daughter?
- f. The manner of his (the Tiger King's) death is a matter of extraordinary interest. Elucidate.
10. Answer the following question in 120 - 150 words. (6)
- Or
- Discuss the relevance of the title - 'On the Face of it'
- Why did Dr Sadao help the American soldier to escape? How did he do it?
11. Answer the following question in 120 - 150 words: (6)
- There is a saying - "Klindness pays, rudeness costs". In the story "The Rat trap", Edla's attitude towards the peddler was different from her father's attitude. Explain how she was instrumental in bringing about a transformation in the character of the peddler.
- Child abuse is a serious problem in our country. Children are forced by circumstances to work, when they should be studying. Who do you hold responsible for the sorry plight of Mukesh and Shabu? How can their lives be bettered?
12. Answer the following question in 120-150 words. (6)
- The Invisible Man lost his temper and left the village of Liping in ruins. Comment.
13. Answer the following question in 120-150 words. (6)
- Attempt a comparative study of the characters of Mrs. & Mr. Hall.

PTO

2. Explain series combination of cells.
2. State the condition for resonance in LCR circuits. Plot a graph showing variation of current with frequency of a.c. source in a series LCR circuit.
7. Explain the term internal resistance of a cell. On what factors does it depend?

OR

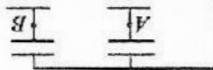


Obtain expression for electric potential at point A, midway between the two charges +q and -q.

6. Four electric charges +q, +q, -q and -q are placed at the corners of a square of side 2L.

SECTION B

1.
For a series LCR circuit, connected to ac source, identify the graph that corresponds to $\omega > \frac{1}{\sqrt{LC}}$.
1. Write the expression of force acting per unit length between two parallel conductors carrying currents.
1. What is Curie law in magnetism?
1.
If each capacitor has capacity equal to C, find equivalent capacity between points A and B



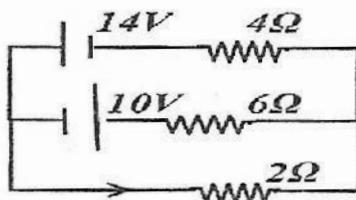
1. What is the value of electric flux through a closed surface S, shown in the figure.
1.
SECTION A

- v) $C = 3 \times 10^8 \text{ m/s} \quad \frac{4\pi \epsilon_0}{l} = 9 \times 10^9 \text{ Nm}^2 \text{ C}^{-2} \quad \mu_0 = 4\pi \times 10^{-7} \text{ Tm/A}$
Use of calculator is not permitted.
- iv) There is no overall choice. However an internal choice has been provided in one question of two marks, one question of three marks and all three questions of five marks.
- iii) Section A contains five questions of one mark each. Section B contains five questions of two marks each, section C contains twelve questions of three marks each. Section D has a value based question of four marks and section E contains three questions of five marks each.
- ii) All questions paper has five sections.

General Instructions:

- CLASS : XI
DATE: 18-09-2015
PHYSICS
FIRST TERM EXAMINATION, 2015
Time: 3 Hours
DELI PUBLIC SCHOOL, BHILAI (C.G.)

9. Show that the current lags behind the voltage by $\frac{\pi}{2}$ when a sinusoidal voltage is applied across a pure inductor. Draw the phasor diagram. 2
10. Explain 'displacement current'. 2
- SECTION C**
11. Derive the expression for energy stored in a parallel plate capacitor. 3
12. Draw a graph showing the variation of resistivity with temperature for nichrome. Which property of nichrome is used to make standard resistance coil? 3
13. Use Kirchoff's rules to determine the value of the current through each battery in the circuit -



3

- 14.a) Explain Wheatstone's bridge and obtain condition for its balancing.
b) Draw circuit of a metre bridge to determine an unknown resistance. 3
15. Define mobility of a charge carrier. Write the relation expressing mobility in terms of Relaxation time. Give its SI unit. 3

OR

- Define drift speed. Write the expression for the current in a conductor of cross section area A in terms of drift velocity. 3
16. Show that the electron revolving around the nucleus in a radius r with orbital speed v has magnetic moment $\frac{1}{2}evr$. Hence using Bohr's postulates, obtain expression for the magnetic moment of hydrogen atom in ground state. 3
17. Express Biot Savart's law in vector form and use it to obtain magnetic field due to a current carrying Circular coil at centre. 3
18. Depict the behaviour of magnetic field lines when (i)diamagnetic and (ii)a para magnetic material is placed in an external magnetic field.
Mention briefly the properties of these materials which explain this distinguishing behaviour. 3
19. Explain working of ac generator with diagram. 3
- 20.a) State Lenz's.
b) A Jet plane with wing span of 25m flies with a speed of 1800 km per hour in eastward direction where total intensity of earth's magnetic field is $5 \times 10^{-4} T$ and angle of dip at that place is 30° . Find emf developed between the tips of the wings. 3
21. Name the types of e.m. radiations which (i)are used in destroying cancer cells (ii)cause tanning of the skin (iii)maintains the earth's warmth . 3

PTO

22. When the oscillating electric and magnetic fields are along the x - and y -directions,
 23. point out the direction of propagation of electromagnetic wave.
 Express the velocity of propagation in terms of the amplitudes of the oscillating electric and
 magnetic fields. How do you show that the em wave carries energy and momentum?

23. Immediately after school hour, as Bimla with her friends came out, they noticed that there was a sudden thunderstorm accompanying by the lightning. They could not find any suitable place for their shelter. Dr Kapoor who was passing by thereby in his car noticed these children and offered them to come in their car. He even took care to drop them to the locality where they were staying. Bimla's parents who were waiting saw this and expressed their gratitude to Dr Kapoor.

(1) What values did Dr Kapoor and Bimla's parents displayed?

(2) Why is it considered safe to be inside a car especially during lightning thunderstorm?

(3) Define the term 'dielectric breakdown'. What does this term signify?

4

Long straight conductor. Draw graph to show variation of field with distance .
5

What is Gauss' law? Using Gauss' law, derive expression for E due to a charged infinite Metal sheet.

Q) Explain its conversion into ammeter.
A) An ammeter of resistance $0.80\ \Omega$ can measure current upto 1.0A.
What must be shunt resistance to enable the ammeter to measure current upto 5 A?

c) An electric line has current of 9 A in the direction east to west. Find direction and magnitude of field at a point 1.5 m below the wire.

26. a) Write Faraday's laws of electromagnetic induction.

If R is the resistance of rod and ring, find expression for power.

a) Describe construction principle, working of a transformer with diagram. What are energy losses and how are they reduced ?

b) A transformer has 300 primary and 2400 secondary turns. If 230 V ac is applied in primary find secondary voltage.

OR

5

If R is the resistance of rod and ring, find expression for power.

b) A metallic rod of length l is rotated with a frequency ω , with one end hinged at the centre and the other end at the circumference of a circular metallic ring of radius r about an axis passing through the centre and perpendicular to plane of ring. A constant and uniform magnetic field B parallel to axis is present everywhere. Deduce the expression for the emf induced in the rod.

g. a) Write Faraday's laws of electromagnetic induction.
of field at a point 1.5m below the wire.

a) State Ampere's circuital law.

b) Apply it to obtain magnetic field due to long straight current carrying conductor at a point outside it. Draw graph to show its variation with distance.

c) An electric line has current of 90A in the direction east to west. Find direction and magnitude

OR

What must be shunt resistance to enable the ammeter to measure current upto 5 A?

c) An ammeter of resistance 0.80 Ω can measure current upto 1.0A.
b) Explain its conversion into ammeter.
c) galvanometer.

With its glass law, using glass law, define expression law to a charge infinite metal sheet.

What is Gaussian? Now, I like Gaussian because it's very expressive for E dile to a charged

long straight conclusion. Draw graph to show variation of total wind resistance.

SECTION E

(2) Why is it considered safe to be inside a car especially during lightning thunderstorm?
(3) Define the term dielectric breakdown. What does this term signify?

23. Immediately after school hour, as Bimla with her friends came out, they noticed that there was a sudden thunderstorm accompanied by the lightning. They could not find any suitable place for their shelter. Dr Kapoor who was passing thereby in his car noticed these children and offered them to come in their car. He even took care to drop them to the locality where they were staying. Bimla's parents who were waiting, saw this and expressed their gratitude to Dr Kapoor.

(1) What values did Dr Kapoor and Bimla's parents displayed?

SECTION 2

22. When the oscillating electric and magnetic fields are along the x - and y -directions,
 23. point out the direction of propagation of electromagnetic wave.
 Express the velocity of propagation in terms of the amplitudes of the oscillating electric and
 magnetic fields. How do you show that the em wave carries energy and momentum?

:2:

14. Consider the following data for the reaction A + B \longrightarrow Product

Conc. of A (mol/L)	Conc. of B (mol/L)	Initial Rate (mol/Ls)
0.1	0.1	4.0×10^{-4}
0.2	0.2	1.6×10^{-3}
0.5	0.1	1.0×10^{-2}
0.5	0.5	1.0×10^{-2}

Calculate (i) Order w.r.t A and B for the reaction. (ii) rate constant (iii) the reaction rate when the conc. of A is 0.2M and B is 0.35M (3)

15. a) Define specific conductivity. (1)

b) The resistance of a conductivity cell containing 0.001 M solution of KCl at 298 K is 1500 ohm. What is the cell constant if the conductivity of 0.001 MKCl solution is $0.146 \times 10^{-3} \text{ Scm}^{-1}$. Also calculate its molar conductivity. (2)

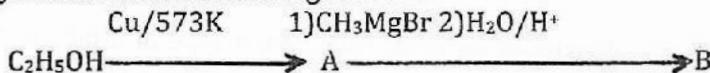
OR

a) State Kohlrasch Law. (1)

b) Calculate the degree of dissociation of acetic acid from the following data: $\Lambda_m^{\infty} (\text{CH}_3\text{COOH}) = 11.7 \text{ S cm}^2\text{mol}^{-1}$, $\Lambda_m^{\infty} (\text{CH}_3\text{COO}^-) = 40.9 \text{ S cm}^2\text{mol}^{-1}$, $\Lambda_m^{\infty} (\text{H}^+) = 349.1 \text{ S cm}^2\text{mol}^{-1}$ (2)

16. a) Write the mechanism of hydration ethene to form ethanol. (2)

b) Identify A and B in the following reaction: (1)



17. Explain the terms : (3)

a) Electrophoresis b) Homogeneous catalysis c) Dialysis

18. What happens when

- a) n-butyl chloride is treated with alcoholic KOH followed by treating with HBr (1)
- b) methyl chloride is treated with alc KCN followed by complete hydrolysis with dilHCl (1)
- c) methyl bromide is treated with Mg in presence of ether followed by reacting with methanol (1)

19. Draw the structure of the products in each of the following (3)

- a) $(\text{CH}_3)_3\text{-C-O-C}_2\text{H}_5 + \text{HI} \longrightarrow ?$
- b) $\text{C}_6\text{H}_5\text{-O-C}_2\text{H}_5 + \text{Con HNO}_3/\text{Con H}_2\text{SO}_4 \longrightarrow ?$
- c) $\text{C}_6\text{H}_5\text{-OH} + \text{Br}_2 \text{ (aq)} \longrightarrow ?$

20. How the following conversions are carried out ? (3)

- a) Propene to propan -1-ol
- b) Aniline to chloro benzene
- c) Ethanol to ethyl fluoride

21. Write short notes on: (3)

- a) Riemer-Tiemann reaction
- b) Friedel- Crafts reaction
- c) Williamson synthesis

22. Give reasons for the following : (3)

a) The C-O-H bond angle in alcohol slightly less than the tetrahedral angle whereas the C-O-C bond angle in ether is slightly greater.

b) p-nitro phenol is more acidic than phenol

c) Preparation of ether by dehydration of secondary and tertiary alcohol is not a suitable method.

23. Mr Gaur has industry which produces semiconductors. He has started preparing typical compounds of group 13-15, such as InSb, AlP and GaAs. Gallium arsenide semiconductors have very fast response and revolutionized the design of semiconductor devices. He has also started producing ZnS, CdS, CdSe and HgTe compound of group 12 and 16. These are excellent semiconductors.

Now answer the following questions: (4)

- a) What types of bonds are formed in these compounds?
- b) What is the effect of temperature on conductance of semiconductor?
- c) Which impurity should be added to group 14 elements to get n-type semiconductor?
- d) What are the values associated with Mr Gaur ?

26. a) What type of battery is lead storage battery? Write the anode and cathode reactions and the overall reaction occurring in a lead storage battery sending out an electric current. (2)
- b) Calculate the standard electrode potential of the following galvanic cell in which the following overall reaction occurs in benzene at 25°C. When 1.80 g of a non volatile solute was dissolved in 90 g of benzene the boiling point is raised to 354.11 K. Calculate the molar mass of the solute. (2)
- c) Why do abnormal molar mass occur during the measurement of molar mass using colligative properties. (2)
- d) Calculate the standard electrode potential of the following galvanic cell in which the following overall reaction occurs in benzene at 25°C. An electrochemical cell is created when the two solutions are connected by a salt bridge and balanced equation for the overall reaction occurring in the cell in a 1 molar solution of AgNO_3 . An electrochemical cell is created when the two solutions are connected by a salt bridge and balanced equation for the overall reaction occurring in the cell in a 1 molar solution of AgNO_3 and a strip of silver metal is placed between them. (2)
- e) Define the term molar conductivity and explain how molar conductivity changes with solution concentration for weak and strong electrolyte. (2)
- f) A strip of nickel metal is placed in a 1 molar solution of $\text{Ni}(\text{NO}_3)_2$ and a strip of silver metal is placed in a 1 molar solution of AgNO_3 . An electrochemical cell is created when the two solutions are connected by a salt bridge and balanced equation for the overall reaction occurring in the cell in a 1 molar solution of AgNO_3 . (2)
- g) Calculate cell potential E at 25°C for the cell if the initial concentration of $\text{Ni}(\text{NO}_3)_2$ is 0.01 M and the initial concentration of AgNO_3 is 1.00 M. $E^\circ_{\text{Ni}^{2+}/\text{Ni}} = -0.25 \text{ V}$; $E^\circ_{\text{Ag}^+/\text{Ag}} = 0.80 \text{ V}$. (2)

27. a) Derive a relationship between $t_1/2$ and $t_{3/4}$ for a first order reaction. (2)
- b) For the reaction $4\text{PH}_3 (\text{g}) \rightleftharpoons \text{P}_4 (\text{g}) + 6\text{H}_2 (\text{g})$ calculate the time required for $t_{3/4}$ of PH_3 to decompose if the first order reaction is 37.9 s at 120°C. (2)
- c) The rate of the reaction increases four times when the temperature changes from 300K to 320K. Calculate the energy of activation of the reaction assuming that it does not change with temperature. (2)
- d) Show graphically that the freezing point of a liquid will be depressed when a non volatile solute is dissolved in it. (2)
- e) Explain the term Order of the reaction (1)
- f) Derive a relationship between 99% and 99.9% for a first order reaction (2)
- g) Calculate the activation energy for the forward reaction. (1)
- h) The osmotic pressure of a 0.0103 M solution of an electrolyte is found to be 0.70 atm at 27°C. Calculate the van't Hoff factor. What conclusion you can draw about the molecular state of the solute in the solution. (3)
- i) Draw the potential energy curve for the reaction. (1)
- j) What will the activation energy for the forward reaction. (1)
- k) For the decomposition of $\text{N}_2\text{O}_5 (\text{s}) \rightleftharpoons 2\text{NO}_2 : \Delta H = +57 \text{ kJ}$, the activation energy for the reverse reaction is 23 kJ. (2)

28. a) Derive a relationship between $t_1/2$ and $t_{3/4}$ for a first order reaction. (2)
- b) For the reaction $4\text{PH}_3 (\text{g}) \rightleftharpoons \text{P}_4 (\text{g}) + 6\text{H}_2 (\text{g})$ calculate the time required for $t_{3/4}$ of PH_3 to decompose if the first order reaction is 37.9 s at 120°C. (2)
- c) For the decomposition of $\text{N}_2\text{O}_5 (\text{s}) \rightleftharpoons 2\text{NO}_2 : \Delta H = +57 \text{ kJ}$, the activation energy for the reverse reaction is 23 kJ. (2)
- i) Draw the potential energy curve for the reaction. (1)
- ii) What will the activation energy for the forward reaction. (1)
- iii) What will the activation energy for the reverse reaction. (1)
- iv) Calculate the activation energy for the reaction. (1)
- v) Calculate the activation energy for the reaction. (1)
- vi) Calculate the activation energy for the reaction. (1)
- vii) Calculate the activation energy for the reaction. (1)
- viii) Calculate the activation energy for the reaction. (1)

13. If $x = 2\cos\theta - \cos 2\theta$ and $y = 2\sin\theta - \sin 2\theta$, find $\frac{dy}{dx^2}$ at $\theta = \frac{\pi}{2}$
- If $f(x)$ is continuous at $x = \frac{\pi}{2}$, find the values of a and b .
12. The function $f(x)$ is defined as $f(x) = \begin{cases} \frac{b(1-\sin x)}{(x-2x)^2}, & x < \frac{\pi}{2} \\ \frac{3\cos^2 x}{1-\sin^3 x}, & x > \frac{\pi}{2} \end{cases}$
11. Find the inverse of the matrix $A = \begin{bmatrix} 2 & 3 & -2 \\ 2 & 2 & 2 \\ 2 & -3 & 3 \end{bmatrix}$ by elementary row transformation
10. Solve for x : $3\sin^{-1}\left(\frac{2x}{1+x^2}\right) - 4\cos^{-1}\left(\frac{1+x^2}{1-x^2}\right) + 2\tan^{-1}\left(\frac{2x}{1-x^2}\right) = \frac{\pi}{3}$
9. Show that $\tan^{-1}\left(\frac{\sqrt{1+x^2} - \sqrt{1-x^2}}{\sqrt{1+x^2} + \sqrt{1-x^2}}\right) = \frac{\pi}{4} + \frac{1}{2}\cos^{-1}x^2$.
8. Given a non empty set X , let $*: P(X) \times P(X) \rightarrow P(X)$ be defined as $A * B = (A - B) \cup (B - A)$. $A, B \in P(X)$. Show that the empty set \emptyset is the identity element for the operation $*$, "and all the elements of $P(X)$ are invertible with $A^{-1} = A$.

Section - B

7. Prove that the function $f: R \rightarrow \{x \in R, -1 < x < 1\}$, defined by $f(x) = \frac{x+|x|}{x}$, $x \in R$ is one-one and onto function.
6. Evaluate: $\int_{-1}^1 (|x| + |x-3|) dx$
5. If $A = \begin{bmatrix} 2 & -2 \\ -2 & 2 \end{bmatrix}$ and $A^2 = PA$, then write the value of P .
4. Evaluate: $\int_{\frac{5\pi}{3}}^{\frac{5\pi}{6}} (2x+3x) dx$
3. For the curve $y = 5x - 2x^3$, if x increases at 2 units/sec then how fast is the slope of the curve changing when $x = 3$
2. If $A = \{1, 2, 3\}$ and $B = \{3, 4, 5, 8\}$ then find the number of one-one function from A to B
1. Find the value of $\tan^{-1}(\tan \frac{5\pi}{6}) + \cos^{-1}(\cos \frac{13\pi}{6})$

Section - A

- (v) Use of calculators is not permitted. You may ask for logarithmic tables, if required.
- (iv) There is no overall choice. However, internal choice has been provided in 4 questions of four marks each and 2 questions of six marks each. You have to attempt only one of the alternatives in all such questions.
- (iii) All questions in section A are to be answered in one word, one sentence or as per the exact requirement of the question.
- (ii) The question paper consists of 26 questions divided into three sections A, B and C. Section A comprises of 6 questions of one mark each, section B comprises of 13 questions of four marks each and section C comprises of seven questions of six marks each.
- (i) All questions are compulsory.
- General Instructions:**

14. Water dripping out from a conical funnel of semi vertical angle $\frac{\pi}{6}$ at the uniform rate of $6\text{cm}^2/\text{s}$, through a tiny hole at the vertex in the bottom. When slant height of water is 4 cm, find the rate of decrease of slant height of water

(OR)

Show that $y = \log(1+x) - \frac{2x}{2+x}$, $x > -1$, is an increasing function of x throughout its domain

15. Evaluate: $\int \frac{3x+8}{\sqrt{x^2+5x+10}} dx$. (OR) Evaluate: $\int x^2 \sin^{-1} x dx$

16. Evaluate $\int \frac{\tan x + \tan^3 x}{1 + \tan^3 x} dx$ (OR) $\int \frac{2+\sin 2x}{1+\cos 2x} e^x dx$

17. Using properties of determinants,

Prove that $\begin{vmatrix} a & b-c & c+b \\ a+c & b & c-a \\ a-b & b+a & c \end{vmatrix} = (a+b+c)(a^2+b^2+c^2)$

18. Evaluate: $\int_0^{\pi/4} \log(1 + \tan x) dx$

19. If $y = (\cot^{-1} x)^2$, then show that $(x^2 + 1)^2 \frac{d^2y}{dx^2} + 2x(x^2 + 1) \frac{dy}{dx} = 2$.
(OR)

If $x^{\sin y} + (\cos y)^x = y$ then find $\frac{dy}{dx}$.

Section-C

20. Evaluate: $\int \frac{\cos x + \sin x}{\cos^2 x + \sin^4 x} dx$

21. The management committee of a residential colony decided to award for some of its members for honesty, some for helping others and some others for supervising workers to keep the colony neat and clean. The sum of all the awardees is 12. Three times the sum of awardees for cooperation and supervision added to two times the number of awardees for honesty is 33. If the sum of the number of awardees for honesty and supervision is twice the number of awardees for helping others, using matrix method, find the number of awardees of each category.

Apart from these values, namely; honesty, cooperation and supervision, suggest one more value which the management of the colony must include for awards

22. Using the properties of determinant, prove that;

$$\begin{vmatrix} a & b & c \\ a(a^2 + 1) & b(b^2 + 1) & c(c^2 + 1) \\ a+1 & b+1 & c+1 \end{vmatrix} = (a-b)(b-c)(c-a)(a+b+c)$$

23. Show that the height of the cylinder of greatest volume which can be inscribed in a right circular cone of height h and having semi-vertical angle α is one-third that of the cone and the greatest volume of the cylinder is $\frac{4}{27}\pi h^3 \tan^2 \alpha$ is $\tan^2 \alpha$

24. Show that the normal at any point θ to the curve $x = a \cos \theta + a \theta \sin \theta$ and $y = a \sin \theta - a \theta \cos \theta$ is at a constant distance from the origin
(OR)

Find the equation of tangent and normal to the curve $x = a \sin^3 \theta$ and $y = a \cos^3 \theta$ at $\theta = \frac{\pi}{4}$

25. Let N denote the set of all natural numbers and R be the relation on $N \times N$ defined by $(a,b) R (c,d)$ iff $ad(b+c) = bc(a+d)$. Check whether R is an equivalence relation on $N \times N$ or not.

26. $\int_0^{\frac{\pi}{2}} \frac{x \sin x \cos x}{\sin^4 x + \cos^4 x} dx$ (OR) Evaluate: $\int_1^4 (x^2 - e^x) dx$ as the limit of a sum

1. Answer the following multiple choice questions. Print the correct choice on your answer sheet.

v) Use the given dimensions in the figure.

iv) All dimensions are in millimetres.

(iii) Missing and mismatching dimensions, if any, may be suitably assumed.

iii) Follow the S.P. 46 - 2003 revised codes (with first angle method of projection)

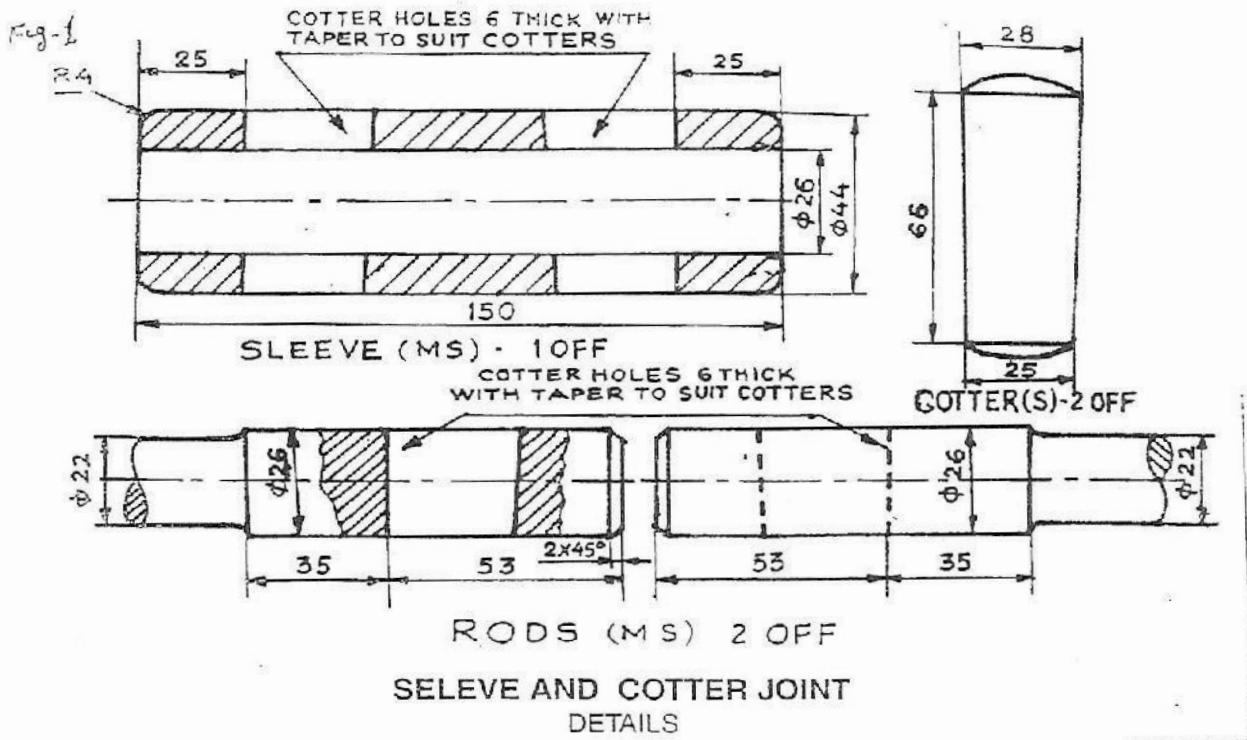
i) Attempt all the questions.

General Instructions:

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4. Figure 1 shows the details of the parts of a SLEEVE AND COTTER JOINT. Assemble these parts properly and then draw the following views using scale 1:1.
- a) Front view, upper half in section. (14)
- b) Right hand side view (9)
- c) Print the title and the scale used. Draw the projection symbol. Give 8 important dimensions. (6)
- (OR)

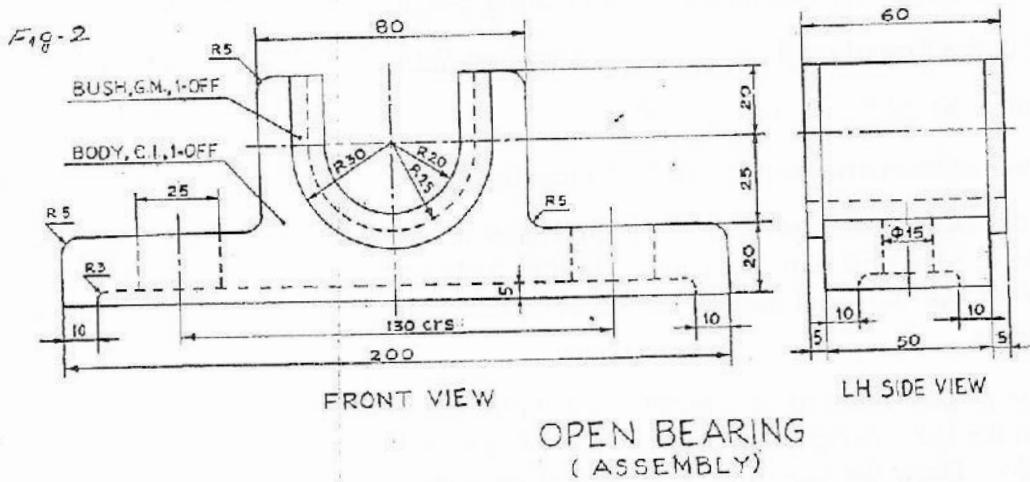
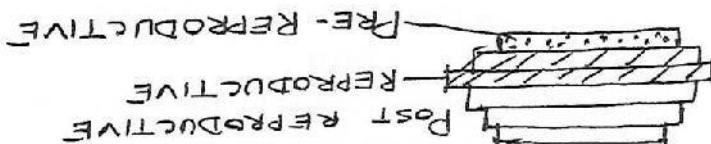


Figure 2 shows the assembly of an Open Bearing. Disassemble the parts and draw the following views to scale 1:1; keeping them in the same position with respect to H.P. and V.P.

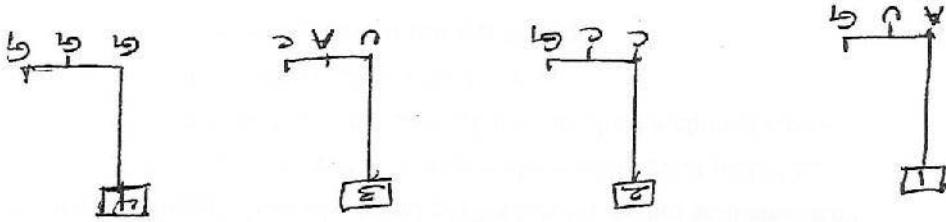
- a) BODY (14)
- i) Front view, right half in section. (8)
- ii) Right hand side view without section. (8)
- b) BUSH (6)
- i) Front View, left half in section. (6)
- ii) Top View, without section

Print titles of both and the scale used. Draw the Projection symbol. Give 6 important dimensions.

- (3) b) Explain how this slide is used in biogas production.
14. a) How does activated sludge get produced during sewage treatment?
b) Vasectomy b) LNG - 20 c) Saheli
13. Name the category and the principle involved in the use of each of the following contraceptive methods : (3)
chromosomes.
12. Name the disorder, give its karyotype and write the symptoms a human suffers due to monosity of sex chromosomes.
b) Give two points of difference between a thalassemia and g thalassemia
(i) Q 174 page (ii) Lambda phage
11. a) Mention the number of base pairs in the DNA of each of the following : (3)
SECTION C
10. Mention four reasons why Drosophila was chosen by Morgan for his experiments in Genetics.
for petrol and diesel vehicles?
- Give two measures taken by Delhi Government to reduce air pollution. What is the norm set by Euro II (OR)
- b) Name the vegetative propagules of Bryophyllum and Agave.
9. a) Name the phase all organisms have to pass through before they can reproduce sexually.
removes fine threads of DNA from pure form from plant cells. Name the process which (2)
8. Enlist two enzymes used in isolation of DNA in pure form from plant cells. Name the process which (2)
mechanism in calotropis agrestis herbivory.
7. Why is the problem of predation more severe in plants than in animals? Highlight about the defense (2)
6. What is seminal plasma? Name one sugar present in it.
SECTION B
5. How are large holes in swiss cheese made?



4. Name the kind of age pyramid shown in the figure : (1)
3. Why are stigmata flowers invariably autogamous?
2. What would happen if corpus luteum is not degenerated?
1,2,3,4 are the amino acids on the tRNA molecules.



1. Find the sequence of bidding of the following amino-acetyl tRNA complexes during translation to a m- (1)
RNA transcribed by a DNA segment having the base sequence 3'-TACATG GTCGCG-.

SECTION A

- v) Wherever necessary, the diagrams drawn should be neat and properly labelled.
the alternatives in such questions.
iv) There is no overall choice. However, an internal choice has been provided in one question of 2 marks.
iii) Section D has a value based question of 4 marks, whereas Section E is of 3 questions of 5 marks each.
ii) The question paper consists of four sections A, B, C and D. Section A contains 5 questions of 1 mark each. Section B is of 5 questions of 2 marks each. Section C is of 12 questions of 3 marks each.
i) All questions are compulsory and answer serially.

General Instructions :

No. of Pages Printed : 2

:::: 2 :::

15. Particulate and gaseous pollutants along with harmless gases are released from the thermal power plants. (3)
a) Name the two harmless gases released.
b) Name the most widely used device for removing particulate pollutants from the air. Explain how the device works.
16. a) Name two organisms which breed only once in their life time. (3)
b) If $\frac{dN}{dt} = rN \left(\frac{K-N}{R} \right)$ is the equation of the logistic growth curve, what does 'k' stand for? What is symbolized by 'N' and 'r'. Why is this growth model considered to be more realistic.
17. Draw a diagram of a mature embryo of grass and label six parts in it. (3)
- (OR)
- Describe the structure of a microsporangium of an angiosperm along with its diagram.
18. The genetic code dictionary codes for several amino acids. (3)
a) How many codons are there in it?
b) How many of them code for amino acids?
c) How many amino acids are coded?
d) What general term is given to the codons which do not code for amino acids? Enlist these codons.
19. How is protein synthesis initiated? Into which end of tRNA is the amino acid attached? (3)
20. Explain the importance of (a) Ori (b) Amp^R (c) Rop in the E-coli vector pBR 322. (3)
21. Draw a T.S. of an apple and label the following parts along with their technical terms
a) Edible part b) The fruit wall c) That encloses the embryo. (3)
22. Describe Blender's experiment. State the aim of this experiment. (3)

SECTION D

23. A couple has five daughters. The man blames the woman for giving birth to daughters. His wife is pregnant for the sixth time, as the couple wants at least one son (4)
a) What is the probability of this couple getting a son this time?
b) Explain to the man who is responsible
c) What values are insisted by convincing him to stop producing more children?

SECTION E

24. a) Describe the duct system associated with male reproductive system.
b) Draw a labelled diagram of the human ovum just released after ovulation.

(OR)

Describe the pollen – pistil interaction in an angiosperm flower.

25. Explain the ovarian and uterine events that occur during a menstrual cycle in a human female, under the influence of pituitary and ovarian hormones respectively.

(OR)

- a) Why does endosperm development precede embryo development in angiosperm seeds? State the role of endosperm in mature alubminous seeds.
b) Describe with the help of three labelled diagrams the different embryonic stages that include mature embryo of dicot plants.

26. a) Give reasons for – (5)
(i) Both strands of DNA are not copied during transcription.
(ii) Transcription and translation in bacteria can be coupled.
b) Differentiate between the process of transcription in prokaryotes and eukaryotes.

(OR)

- a) With the advent of rDNA technology a powerful tool is available to identify a criminal or the real parents. Name this technique. Write the missing steps in the procedure given below :

- i) Extraction of DNA from the cells
ii) _____
iii) DNA is cut into fragments by restriction enzymes.
iv) _____
v) _____
vi) _____
vii) Autoradiography
viii) _____

- *****
- (5) Explain different types of microbial cell culture with graphical representation. Which is the best culture method and why?
29. Explain the indirect method of gene transfer in plants.
- (5) Why Agrobacterium tumefaciens is called natural genetic engineer of plants?
- Explain the procedure of identifying a specific sequence of DNA from a heterogeneous population of DNA molecule.
- (OR)
- (5) How can a specific region of DNA molecule amplified. Explain the procedure. Write two applications of it.
- SECTION D**
- (3) What are the important features of M13 and lambda phage.
- (3) What is lyophilisation? Name the microorganism used in the production of a - Lysine and Amylase.
- (3) Explain the production and mode of action of TPA.
- (3) With the help of flow sheet diagram, Explain the isolation of Streptomycin from Streptomyces cerevisiae.
- (3) Transgenic plants show resistance to virus and bacteria. Explain.
- (3) What is the main principle of Sanger's Chain Termination method in DNA sequencing. Write the structure of ddNTP.
- (3) Children in developing countries are malnourished. How can this be prevented by giving an example.
- (3) How is pH maintained in a cell culture and why pH should be maintained?
- (3) b) mRNA cannot be used to create DNA Library?
- (3) a) cDNA library is preferred for expressing eukaryotic protein.
18. Give reason :
- SECTION C**
- (2) What is the importance of factor IX.
- (OR)
- (2) State the difference between YAC and BAC vectors.
- (2) Explain any four methods of introducing rDNA into host cells.
- (2) Freezing is lethal to animal cells. How are the cells protected during preservation.
- (2) Unnecessary pollination can be prevented for the production of hybrid plants. Explain the procedure.
- (2) What are the major concerns of GM foods?
- (2) Why CO₂ incubators are used in animal cell culture.
- (2) How can acute graft rejection be prevented during transplantation.
- (2) What features has to be considered while selecting a nutrient medium for microbial culture?
- (2) What are the important features of a vector.
- (2) 10⁵ /ml to 10⁸ /ml during 5 hours of exponential growth.
- (2) Calculate the generation time of a bacterial population in which number of bacteria increases from 8. How do bacteria protect itself from bacteriophages?
- (2) 10⁵ to 10⁸ /ml during 5 hours of exponential growth.
- SECTION B**
- (1) What is RFLP? Write an application of it.
- (1) Name the microbial source for HindIII restriction enzyme.
- (1) Name the gene that codes for galactosidase.
- (1) Why is BT cotton resistant to insect pest?
- (1) Which is the most common bioreactor used in microbial cell culture.
- (1) Name the cell line used to produce r-HuEPO.
- SECTION A**
- iv) Wherever necessary, the diagrams drawn should be neat and properly labelled.
- v) The alternatives in such questions, one question of 3 marks and one questions of 5 marks weightage. A student has to attempt only one of them is no overall choice. However, an internal choice has been provided in one question of 2 marks, one question of 3 questions of 5 marks each.
- vi) The question paper consists of four sections A, B, C and D. Section A contains 6 questions of 1 mark each. Section B is of 11 questions of 2 marks each. Section C is of 9 questions of 3 marks each whereas Section D is of 3 questions of 5 marks each.
- vii) All questions are compulsory and answer serially.
- General Instructions :

No. of Pages Printed : 2

CLASS : XI

DATE : 21-09-2015 FIRST TERM EXAMINATION, 2015 Time: 3 Hours

DEHLI PUBLIC SCHOOL, BHILAI (C.G.)

DATE : 21-09-2015 CLASS : XI
DELHI PUBLIC SCHOOL, BHILAI (C.G.) FIRST TERM EXAMINATION, 2015
TIME: 3 Hours INFORMATION PRACTICES (065) M.M.: 70
No. of Pages Printed : 4

General Instructions:

1. A company with 50 computers (stand-alone) is considering networking them together and adding a server. State 2 advantages of doing this.

2. Identify the following devices :

i) An intelligent device that connects several nodes to form a network and redirects the received information only to intended node(s).

ii) A device that regenerates (amplifies) the received signal and re-transmits it to its destination.

iii) Write one advantage and one disadvantage of using Optical Fiber cable.

e) What is spoofing?

f) Ms Ritiika is not able to identify the domain name and the protocol in the given URL.

g) Identify and write it for her : <http://www.cbsc.nic.in/help.htm>.

2. a) Expand the following : FLoss, ODF

b) What was the objective behind developing UNICODE?

c) Write one example of Property and one Open Source Software.

d) What for the following softwares are used?

e) i) Linux (ii) Python (iii) MySQL (iv) Mozilla Firefox

f) a) Distinguish between ‘/’ and ‘%’ operators with example.

g) b) What will be the value of variable ‘c’ after execution of the following codes :

(1) int c;
 (2) int d;
 (3) int c;
 (4) d = 7;
 (5) c = (10 * ++d)%3
 (6) and store it in a variable n.

3. a) Write JAVA code to assign the value 900 to a variable m. Decrease the value of m by 150 and store it in a variable n.

b) How many times the following loop get executed?

(1) int L = 36;
 (2) while (K <= L)
 (3) {
 (4) K = K+6;
 (5) }
 (6) }
 (7) }

e) What will be the values of variables ‘P’ and ‘Q’ after the execution of the following code?

f) Rewrite the following code using switch: (2)

```
if (ch == 'C')
    chenab++;
if (ch == 'G')
    ganges++;
if (ch == 'Y')
    yamuna++;
else unknown ++;
```

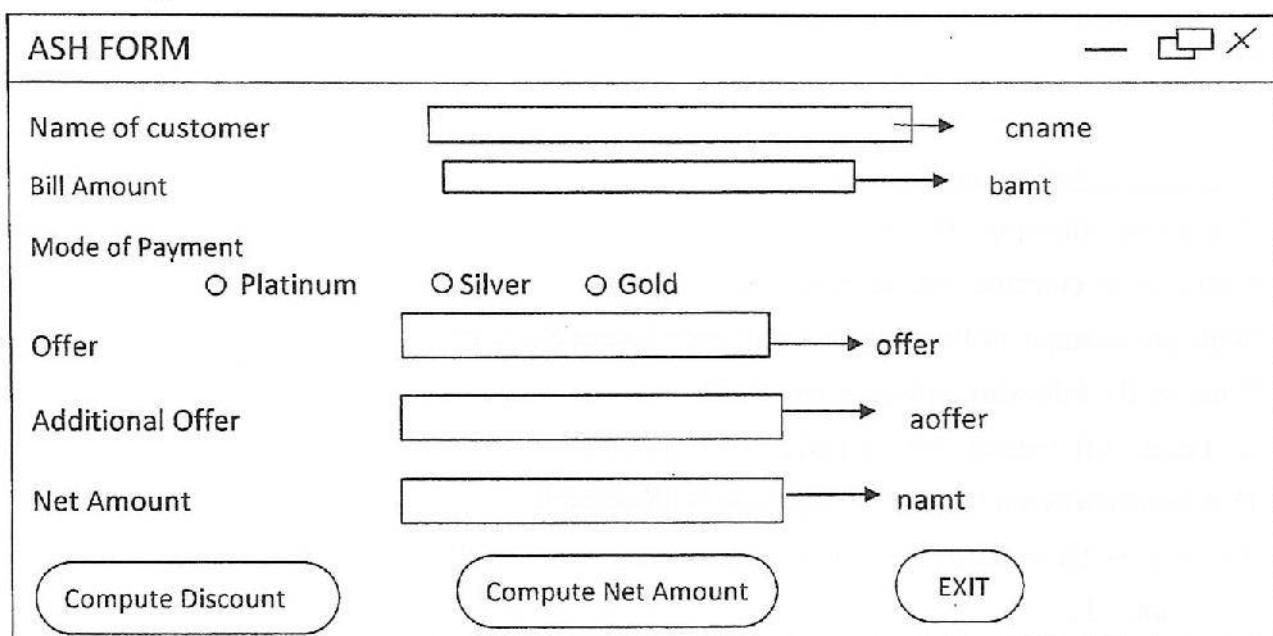
4. a) Write JAVA statement to make a JTextField1 disabled. (1)

b) Which property of ListBox is used to display values in the list? (1)

c) Given a string named Pay having as "68000" stored in it. Obtain the output of the following : (1)

```
JOptionPane.showMessageDialog(null, " " +Pay.length()+Integer.parseInt(Pay)); (1)
```

d) Mr. Anurag the owner of the ASH Land Enterprises has asked his programmer Nikita to develop the following GUI in Netbeans:



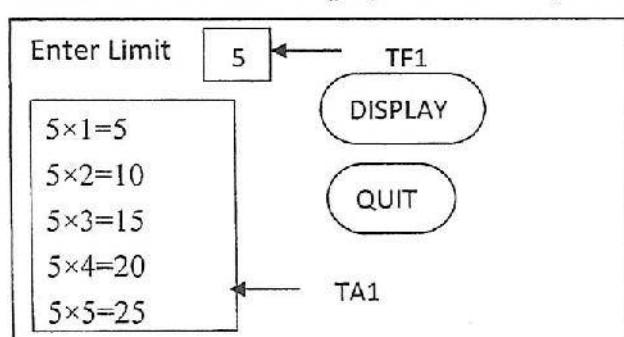
The offer is given according to the following scheme:

Type of Card	Offer
Platinum	20% of amount
Gold	15% of amount
Silver	10% of amount

If the Bill amount is more than ₹ 25,000 then the customer gets an additional offer of 5%.

Write JAVA code for the following :

- i) To assign Additional Offer as 0 and NetAmount as 0 and set them as un-editable. (1)
 - ii) To calculate discount on 5% of amount as per above table. (2)
 - iii) To calculate NetAmount as Total Cost – Offer – Additional Offer (2)
 - iv) To exit/close application. (1)
- e) Write JAVA code for 'Display' button & 'Quit' button.(Use for loop) (3)



- (4) c) Explain the use of the following data functions with example :
 (i) now(), (ii) date(), (iii) dayname(), (iv) month()
- (4) b) Explain the use of the following functions with example :
 (i) char(), (ii) length(), (iii) pow(), (iv) truncate
- (2) 7. a) Predict the output of the following queries :
 (i) Select 11 mod 3;
 (ii) Select concat('Ram','Shyam');
- i) To display details of student in descending order of percentage.
 ii) To add a new column Bus-fees with data type and size as decimal (8,2).
 iii) To change percentage of 'B001' as 95.8.
 iv) To enter a new record as 'B006', 'Gaurav', 86.8, '12I', 'Humanities'
 v) Select count(*) from exam;
 vi) Select name,percentage from exam when name like 'N%';
 vii) Select round (percentage,0) from exam where ADNO = 'B001';
 viii) Select avg(percentage) from exam;

ADNO	SNAME	Per	Class	Stream	Commerce
B005	Naina	95.2	12B		Commerce
B004	Kritika	99.8	12D	Science	
B003	Raman	68.4	12B	Science	
B002	Sushant	98.6	12B	Humanities	
B001	Palak	88.2	12A	Science	

- (8) Write command of MySQL for (i) to (IV) and output for (V) to (Vii)
- b) Consider the following table named 'EXAM' with details of marks.
6. a) What is the difference between Primary Key and Unique Key in MySQL.
- (2) 6. b) What is the difference between container tag and empty tag? Give example also.
- (2) Write the correct code also.

- (1) e) What is wrong with the following code?
- (1) d) Write HTML code to display $E = mc^2$
- <OL TYPE="a" start = "d">

- (2) c) Write HTML code to display the given table
- (1) b) Give two attributes of <table> tag of HTML
- (1) ii) Insert an empty line in the web page.
- (1) i) Insert a picture in the web page
5. a) Which tag is used to :
 (Date will be selected by the user)

DAY	MONTH	YEAR	CB3
Choose data	1 JANUARY ▲	2015 ▲	CB2
LBR →			CB1
DISPLAY			1 JANUARY 2015

- (3) 6) Write JAVA code for the given GUI.

PART A (ACCOUNTING FOR COMPANIES AND PARTNERSHIP FIRMS)

1. This question paper contains two parts A and B.
 2. Both the parts are compulsory.
 3. Each question carries marks indicated against it.
 4. All parts of questions should be attempted at one place.

GENERAL INSTRUCTIONS:

No. of Printed Pages : 3

DATE : 18-09-2015 **TIME : 3 HOURS**
DEHLI PUBLIC SCHOOL, BHILAI (C.G.) **FIRST TERMINAL EXAMINATION - 2015** **M.M. : 80**
CLAS : XI **ACCOUNTANCY**

- 13 Das and Mishra decided to start a partnership firm to manufacture low cost jute bags as plastic bags were creating many environmental problems. They contributed capitals of ₹ 1,00,000 and ₹ 50,000 on 1st April, 2014 for this. Das expressed his willingness to admit his friend Sethi as a partner without capital, who is specially abled but very creative and intelligent. Mishra agreed to this, the terms of partnership were as follows :
- Das, Mishra and Sethi will share profits in the ratio of 2:2:1.
 - Interest on Capital will be provided @ 6% p.a.
- Due to shortage of capital, Das contributed ₹ 25,000 on 30th September, 2014 and Mishra contributed ₹ 10,000 on 1st January, 2015 as additional capital. The profit of the firm for the year ended 31st March, 2015 was ₹ 1,68,900.
- Identify any two values which the firm wants to communicate to the society.
 - Prepare Profit & Loss Appropriation Account for the year ending 31st March, 2015. (6)
- 14 a) SKN Ltd. forfeited 200 Equity Shares of ₹ 10 each fully called-up, held by Santosh for non-payment of allotment money of ₹ 3 per share and final call of ₹ 4 per share. He paid the application money of ₹ 3 per share. These shares were reissued to Nath for ₹ 8 per share. Give journal entries for forfeiture and reissue of shares. (3+3=6)
- b) TRM Ltd. forfeited 200 shares of ₹ 100 each (₹ 60 called-up) issued at par to Ram on which he paid ₹ 20 per share. Out of these, 150 shares were reissued to Mohan as ₹ 60 paid-up for ₹ 70 per share. Give Journal entries for forfeiture and reissue of shares. (3+3=6)
- 15 a) Parv and Sagar were partners in a firm sharing profits in the ratio of 7:3. Their fixed capitals were : Parv ₹ 4,50,000 and Sagar ₹ 2,00,000. The partnership deed provided for the following but the profit for the year was distributed without providing for :
- Interest on capital @ 9% p.a.
 - Sagar's salary ₹ 25,000 per year and Parv's salary ₹ 1,500 per month.
- The profit for the year ended 31.3.2015 was ₹ 1,39,000. Pass the adjustment entry.
- b) P,Q and R are partners in a firm sharing profits in the ratio of 2:2:1. R is guaranteed ₹ 1,20,000 as his share of profit every year. Deficiency, if any, on that amount shall be borne by Q. The profits for the year ended 31.03.2015 were ₹ 5,00,000. Prepare Profit & Loss Appropriation Account. (3+3=6)
- 16 Ajay Ltd. issued 21,000, 7% Debentures of ₹ 100 each on 31st March, 2006 redeemable at a premium of 8% on 30th June, 2015. The Board of Directors decided to transfer the required amount to Debenture Redemption Reserve before the redemption of the debentures. The company invested the funds as required by law in fixed deposit in a bank earning interest @ 10% p.a. Tax was deducted on interest earned @ 10% by the bank. Pass necessary Journal entries regarding issue and redemption of debentures. (8)

(OR)

- Name the Securities specified for Investment as per Rule 18(7) of the Companies (Share Capital and Debentures) Rules, 2014.
 - Bank of India Ltd. has outstanding of 1,00,000, 10% Debentures of ₹ 100 each issued in 2005 due for redemption on 30th June, 2015. How much amount of Debenture Redemption Reserve should be created before the redemption of debentures begins? Pass Journal entries at the time of redemption of debentures.
 - On 1.4.2007 KCG Ltd. made an issue of 3,000, 6% Debentures of ₹ 100 each. The company during the year 2014-15 purchased for cancellation 600 of these debentures. The company paid ₹ 95 per debenture for 500 debentures and ₹ 98 per debenture for the rest. The expenses on purchase amounted to ₹ 400. Pass journal entries in the books of the company for the period 2014-15. (2+3+3=8)
- 17 Parth Ltd. offered 10,000 shares of ₹ 10 each payable as ₹ 2 on application, ₹ 3 on allotment, ₹ 3 on first call and ₹ 2 on the final call. The public applied for 15,000 shares. The shares were allotted on a pro-rata basis to the applicants of 12,000 shares. All shareholders paid the allotment money except Nihar who was allotted 200 shares. These shares were forfeited. The first call was made thereafter. The forfeited shares were reissued @ ₹ 9 per share as ₹ 8 paid-up. The final call was not yet made. You are required to prepare Cash Book and pass Journal entries. (8)

(OR)

Prabhav Engineering Ltd. invited applications for 20,000 equity shares of ₹ 10 each at a premium of ₹ 2 per share payable as ₹ 2 on application, ₹ 5 on allotment (including premium), ₹ 3 on first call and the balance on second and final call.

Applications were received for 30,000 shares and pro-rata allotment was made on the applications for 24,000 shares. Money overpaid on applications was adjusted against amount due on allotment. Aditya, to whom 400 shares were allotted, failed to pay the allotment money and on his subsequent failure to pay first call his shares were forfeited. Ravi, the holder of 600 shares, failed to pay two calls and his shares were forfeited after the second call.

Pass necessary journal entries in the books of the company. (8)

(6)

- a) The company paid interest of ₹ 45,000 on its public deposits.
 b) Depreciations provided on machinery during the year ₹ 2,00,000.

Prepare a Cash Flow Statement after taking into account the following adjustments:

				Total	
1. Non-Current Assets					c) Cash & Cash Equivalents
Fixed Assets : Tangible Assets (Machinery)	16,00,000	9,00,000	2,00,000	2,50,000	b) Trade Receivable
Intangible Assets (Goodwill)	16,00,000	9,00,000	2,00,000	2,50,000	a) Inventories
2. Current Assets					2. Current Assets
Inventory	1,40,000	9,00,000	2,00,000	2,50,000	b) Trade Receivable
Trade Receivable	5,00,000	3,00,000	60,000	60,000	c) Cash & Cash Equivalents
Cash & Cash Equivalents	2,50,000	2,00,000	60,000	2,50,000	
II ASSETS					
Total	25,80,000	16,60,000	60,000	25,80,000	
1. Shareholders' Funds					
(a) Share Capital	10,00,000	14,00,000	5,00,000	5,00,000	Statement of Profit & Loss
(b) Reserves & Surplus (Surplus i.e., balance in	10,00,000	14,00,000	4,00,000	2,00,000	Long-Term Borrowings (9% Public Deposits)
2. Non-Current Liabilities					3. Current Liabilities
Statement of Profit & Loss	5,00,000	6,00,000	2,00,000	60,000	Short-Term Provisions (Provision for Tax)
Chemicals Works Ltd. as on 31 st March 2014 and 2015:					
Following particulars have been taken from Notes to Accounts to the Balance Sheets of Sagar					

(4)

- (i) Compute Net Profit Ratio for the year 2014-15.
 You are required to - (i) Prepare a Comparative Statement of Profit & Loss.
 Interest on Investments made during 2014-15 was ₹ 30,000. Taxes payable @ 50%.

(4)

- Following are the information of the items relating to statement of Profit & Loss of AHZ Ltd.
 Closing inventory was ₹ 20,000 more than opening inventory.

(4)

- Additional Information :
 Operations ₹ 4,20,000.
 Inventory ₹ 1,00,000; Trade Receivables ₹ 1,20,000; Advance Tax ₹ 4,00,000; Cash and Cash Equivalents ₹ 60,000; Trade Payables ₹ 1,05,000; Bank Overdraft ₹ 8,000; Cost of Revenue from Diversified ₹ 4,20,000.

(4)

- From the following information available from DKC Ltd on 31.3.15, calculate : (a) Liquid Ratio, (b) Inventory Turnover Ratio and (c) Current Ratio.

(4)

- i) Public Deposits for 5 years
 ii) Work-in-Progress
 iii) Trade Investments
 iv) Bank Overdraft

(4)

- Sheet of a Company as per Schedule III Part I of the Companies Act, 2013 :
 Under which major headings and sub-headings will the following items be shown in the Balance Sheet of a Company as per Schedule III Part I of the Companies Act, 2013 :

(1)

- Understand the amount of cash flows from investing activities.
 in debentures of five different companies during the financial year. It received ₹ 1,00,000 ad dividend ₹ 50,000; Trade Receivables ₹ 1,20,000; Advance Tax ₹ 4,00,000; Cash and Cash Equivalents ₹ 60,000; Trade Payables ₹ 1,05,000; Bank Overdraft ₹ 8,000; Cost of Revenue from Diversified ₹ 4,20,000; Inventory ₹ 1,00,000; Public Deposits ₹ 30,000.

(1)

- With the following information of a company, calculate net amount of increase in cash and cash equivalents.

(1)

PART B FINANCIAL STATEMENT ANALYSIS

A consumer consumes only two goods X and Y, both priced at ₹ 2 per unit. If the consumer chooses a combination of the two goods with Marginal Rate of substitution equal to 2, is the consumer in equilibrium? Why or why not? What will be the reaction of the consumer in this situation? Explain.

(OR)

$\frac{P_x}{Mux} > \frac{Py}{My}$
Explain how will the consumer react.

(6)

17) By planning to spend his entire income only on two goods the consumer finds that :

(6)

Good (ii) there is a fall in the price of the given good. Use diagram.

16) What will be the effect on the demand for a commodity, when (i) there is a fall in the price of substitute

(ii) What is the effect on the budget line, if there is a rise in price of the good shown on the y-axis.

(6)

i) Why does a higher indifference curve imply a higher level of satisfaction?

(6)

15) Explain the following:

(6)

Use MR-MC approach.

14) Explain why will a producer not be in equilibrium if the conditions of equilibrium are not met.

(6)

reasons behind each phase. Use diagram.

13) What are the different phases in the law of variable proportions in terms of marginal product. Give

MC -----	20	10	15	25
Output ---	1	2	3	4

(4)

12) Assuming that TFC is ₹ 12, calculate TC, TVC, ATC and AVC from the following -

(4)

with example.

11) Distinguish between (a) Normal goods and inferior goods and (b) substitute and complementary goods

What change in TR will result in : (i) a decrease in MR. (ii) an increase in MR.

(OR)

(3)

10) Can the AFC curve touch the x-axis and y-axis? Explain the shape of AFC curve with diagram.

(3)

9) How does the availability of substitutes influence price elasticity of demand of a commodity?

(3)

8) A consumer buys 40 units of a good at a price of ₹ 3 per unit. When price rises to ₹ 4 per unit he buys 40 units. Calculate price elasticity of demand by total expenditure.

(3)

7) Explain the basic problem of distribution of income.

(3)

6) Prepare a production possibility schedule assuming that MOC is constant. Also comment on the shape of PPF.

(3)

5) Explain briefly the concept of opportunity cost with example.

(3)

4) a) Always same b) Always different c) Sometimes same d) sometimes different

(3)

Price and Average revenue are :

(1)

a) Taxes b) Income c) Price of related goods d) all of these

(1)

3) A Demand curve 'shifts' due to change in :

(1)

c) Marginal rate of substitution is decreasing d) All of these

(1)

a) The consumer consumes only two goods b) preferences are ordinal

(1)

2) An indifference schedule is based on the assumption that :

(1)

a) 4y b) 3y c) 2y d) 1y

(1)

1) The nation has two alternatives of producing $100x + 200y$ or $102x + 196y$ from its given resources. The nation chooses the second. What is the marginal opportunity cost of producing X :

SECTION A (Micro economics)

Qs.no.1-17 and 27-29 are long answer questions carrying 6 marks each. Answer to them should normally not exceed 100 words each.

Qs.no.18-26 are also short answer questions carrying 4 marks each. Answer to them should normally not exceed 70 words each.

Qs.no.11-12 and 24-25 are short answer questions carrying 4 marks each. Answer to them should

not exceed 60 words each.

Qs.no.5-10 and 22-23 are short answer questions carrying 3 marks each. Answers to them should normally not exceed 60 words each.

Answers to one sentence each.

3. Qs.no.1-4 and 18-21 are very short answer questions carrying 1 mark each. They are required to be

2. Marks for questions are indicated against each questions.

1. All questions in both sections are compulsory.

SECTION B (Macro economics)

- 18) How much money are banks able to create is determined by : (1)
 a) Initial deposits b) SLR c) CRR d) All of these
- 19) Supply of money refers to quantity of money : (1)
 a) During the year only b) During any period of time
 c) As on 31st March only d) As on any point of time
- 20) Operating surplus is : (1)
 a) Profit b) Profit + Rent c) Profit + Rent + Interest d) Profit + rent + royalty + interest
- 21) On production phase of the circular flow of Income, the income are : (1)
 a) Created b) Distributed c) Spent d) Accumulated
- 22) Explain circular flow of income in a two sector economy with capital market. (3)
- 23) Explain briefly the medium of exchange function of money. (3)

(OR)

Explain the problem of double coincidence of wants with the barter system.

- 24) Briefly explain the process of credit creation by commercial banks with the help of an example. (4)
- 25) Explain how externalities are a limitation of the GDP as an indicator of welfare. (4)

(OR)

Explain now 'inequality in Income' a limitation of the GDP as an index of welfare.

- 26) Calculate NVA at Fc from the following data : (4)

Items	₹ Crore
i) Depreciation	5
ii) Sales	100
iii) Opening Stock	20
iv) Intermediate consumption	70
v) Excise Duty	10
vi) Change in stock	(-) 10

- 27) Will the following be a part of domestic factor income of India? Give reasons for your answers. (6)
- i) Old age pension given by government.
 - ii) Factor income from abroad.
 - iii) Salaries to Indian residents working in Russian Embassy in India.
 - iv) Profits earned by a foreign company in India.

- 28) Explain how can Central Bank uses (i) Bank rate and (ii) Margin requirements to influence credit creation by the commercial banks. (6)

(OR)

Describe (a) 'banker to the govt' and (b) 'bankers bank and supervisor function' of the Central Bank.

- 29) Calculate the National income by (a) income and (b) expenditure methods. (6)

Items	₹ in crore
i) Wages and Salaries	500
ii) Govt. final Consumption Expenditure	120
iii) Royalty	20
iv) Interest	40
v) Household Final consumption expenditure	600
vi) Change in stocks	10
vii) Indirect tax	100
viii) Rent	50
ix) Final consumption expenditure of private non-profit institutions serving households	30
x) Net domestic fixed capital formation	60
xi) Profit after tax	100
xii) Corporate tax	20
xiii) Net exports	(-) 20
xiv) Subsidies	30
xv) Net factor income from abroad	(-) 5

General Instructions:

- Answers to questions carrying 1 Mark should not exceed 20-25 words.
- Answers to questions carrying 3 Marks should not exceed 40-50 words.
- Answers to questions carrying 4 Marks should not exceed 60 to 80 words.
- Answers to questions carrying 5-6 Marks should not exceed 100 words.
- Attempt all parts of a question together.

- Name the process by which a manager synchronizes the activities of different department.
- Why business environment is called dynamic?
- Give one difference between policy and procedure.
- Name the frame work within which managerial and operating tasks are performed to accomplish desired goals?
- To determine its manpower requirements an organization analyzes two things. Name them.
- State the element of direction which helps in implementing the principle of Scalar Chain.
- Explain why "Planning is said to be prescriptive in nature whereas controlling is evaluative."
- Identify the decision taken in financial management which affects the liquidity as well as the profitability of the business.
- Akshat, a new entrant in the industry with M.Com degree, joined an organization. The top level management offered him a very low pay.
- Which principle of management is overlooked and why? How will it affect Akshat?
- What is meant by 'Recruitment'? State any four limitations of internal source of recruitment.
- Kamisha Ltd. needs to raise funds of Rs. 75,00,000. Its expected earning before interest and tax (EBIT) are Rs. 75,000. The company wishes to use more of debt compared to equity to raise earnings per share (EPS). The debt is available at an interest of 12%. As a finance manager, advise whether the company should prefer more of debt or more of equity to have higher (EPS).
- "Leadership is a key factor in making any organization successful." Do you agree with this statement? Give any three reasons in support of your answer.
- Sneha Power Ltd. set up a factory for manufacturing solar lanterns in remote villages as there was no reliable supply of electricity in rural areas. The revenue earned by the company was sufficient to cover the costs and the risks. The demand for lanterns was increasing day by day, so the company decided to increase production to generate higher sales. For this they decided to employ people from the nearby villages, as very few job opportunities were available in that area. The company also decided to open schools and creches for the children of its employees.
- Mr. Shail after completing his MBA from USA comes to India to start a new business under the banner Ecom Creations Ltd. He launches a new product in e-learning for Senior Secondary School students in Commerce stream, which already has an established market in UK and USA but not in India. His business starts flourishing in India. Now more Indian companies catering to other subjects also enter the market.
- Ritika Ltd. is manufacturing chemicals and textiles. What type of organizational structure would suit the business environment.
- Every action in the organization is initiated through directing". Explain any four points of importance of requirement of such an organization? State any three advantages of this organizational structure. (4)
- Priyanshi & Co. is a large manufacturing unit. Recently the company had conducted time and motion studies and concluded that, on an average, a worker could produce 300 units per day. However, it has been noticed that the average daily production of a worker is in the range of 200-225 units.
- Name the function of management and identify the step in the process of this function which helped in finding out that the actual production of a worker is less than the set target.
- To complete the process of the function identified in (i) and to ensure the performance as per time and motion studies, explain what further steps a manager has to take.

19. Aashi International Ltd. earned a net profit of Rs. 50 crores . Palak the finance manager of Aashi international Ltd. wants to decide how to appropriate these profits. Identify the decision that Palak will have to take and also discuss any three factors which help him in taking decision. (4)
20. Distinguish between 'Delegation' and 'Decentralization' on the basis of the following: (i) Purpose; (ii) Scope; (iii) Nature; (iv) Authority and (v) Responsibility. (5)
21. What is meant by incentives? Explain the various types of monetary incentives which may be used to motivate the workers. (5)
22. Dibyajoti is the Finance Manager of a newly established company. The directors have asked him to determine the amount of fixed capital requirement for the company. Explain any five factors that he will consider while determining the fixed capital requirement for the company. (5)
23. Briefly explain the various steps involved in the process of selection of employees. (6)
24. Jugot Company Ltd has set the objective of increasing sales by 20% in the next financial year. The company is also providing guidelines on how all departments would contribute to this organizational goals.
(i) Identify the function of management involved.
(ii) Identify other steps involved in the process of this function.
(iii) Give any one advantage of this process which is beneficial to society. (6)
25. (a) Explain the following principle of management: (i) Scalar chain (ii) Unity of Direction
(b) Explain Differential Piece Wage system. (6)

SUV	2500
VAN	800
SMLL	1000
Car type	Rent

Assignment () to assign the rent as per the given Car type :

Methods

Car Id	# numeric value
About Car	# string value
Cartype	# string value
Rent	# numeric value

Instance Attributes :

d) Write the definition of a class CARRENTAL with the following description :
 e) Explain --str__() with example.

b) Differentiate between Static and Dynamic binding with example.

a) What is Polymorphism? Explain.

iii) $m = [[x, x + 1, x + 2] \text{ for } x \text{ in range}(0, 3)]$

i) print('abcefd'.Replace('cd', 12))

f) What is the output of the following statements?

(iv) A - G - R - M -

(iii) O - R - A - G -

(ii) P - O - R - Y -

(i) R - P - O - R -

i=i+1

print(P[K], ' ',

K=random.randrange(0, 3)+5

while P[i]==R :

i=0

P='MY PROGRAM'.

def demo():

e) What are the possible outcome(s) expected from the following Python code? Also specify maximum and minimum value, which variable K can have.

t = (((a, 1), b, c), d, 2), e, 3)

print('Area', '+a

a*pi*pow(r, 2))

rawinput('Enter any radius')

def main():

d) Rewrite the following Python after removing all syntax error(s). Underline the correction done.

t = (((a, 1), b, c), d, 2), e, 3)

c) What is the length of the tuple shown below?

b) What is the difference between the Formal parameter and Actual parameters?

type(87%5) == 87L%5

type(87%5) == type(87L%5)

a) Predict the output produced by the following code :

ii) Programming Language : Python.

iii) All the questions are compulsory.

General Instructions :

No. of Printed Pages : 3

GetCar() to allow user to enter values for CarID, CarType and call function AssignRent() to assign Rent.

ShowCar() to allow user to view the content of all the data members.

- e) What is the difference between `__init__()` & `__del__()` functions? (2)
 - f) How shallow copy is different from deep copy? Explain. (1)
 - g) Let A and B be objects of class DEMO, which function are called when print A+B is executed? (2)
 - h) Give one example of `hasattr()`. (1)
3. a) What is super() function? What is its significance? (2)
- b) Write any two advantages of Inheritance. (2)
- c) Write complete Python code to illustrate the use of Multiple Inheritance. (4)
- d) Explain the use of `issubclass()` function. (2)
4. a) What is the difference between 'r' and 'rb' modes? (2)
- b) Write a function `Display()` to display all words starting with 'P' stored in a text file 'Word.txt'. (2)
- c) Write a function `Del_Rec()` to delete the record from a file 'std.txt' if the name of student to be deleted is given. Records are stored as given below : (3)
- 1 ~Rashmi ~ 90
 2 ~Noori ~ 98
 3 ~Bala ~ 97
 4 ~Pooja ~ 86
- d) Consider the following definition of class Student. Write a method in Python to write the content in a pickled file 'student.txt' (3)
- ```
class Student :
 def __init__(self, in, safe) :
 self.name = sn
 self.age = sage
 def Show(self) :
 print self.name, '#', self.age
```
5. a) What is an exception? (1)
- b) Explain the use of the following built-in exception : IndexError, IOError (2)
- c) Write a program to generate Fibonacci value using a generator function Fibo() (2)
6. a) What is a Primary Key in a table? (2)
- b) Differentiate between the term Degree and Cardinality of a table. (2)
- c) Write any two advantages of database. (2)
7. a) Write one DDL and one DML command. (2)
- b) Consider the following tables PRODUCT and CLIENT. Write SQL commands : (12)

**TABLE : PRODUCT**

| P_ID | Product Name  | Manufacturer | Price |
|------|---------------|--------------|-------|
| TP01 | Talcom Powder | LAK          | 40    |
| FW05 | Face Wash     | ABC          | 45    |
| BS01 | Bath Soap     | ABC          | 55    |
| SH06 | Shampoo       | XYZ          | 120   |
| FW12 | Face Wash     | XYZ          | 95    |

**TABLE : CLIENT**

| C_ID | Client_Name   | City      | P_ID |
|------|---------------|-----------|------|
| 01   | Cosmetic Shop | Delhi     | FW05 |
| 6    | Live Life     | Mumbai    | SH06 |
| 12   | Total Health  | Bhilai    | BS01 |
| 15   | Pretty Woman  | Delhi     | FW12 |
| 16   | Dream         | Bangalore | TP01 |

- i) To display the details of those clients whose city is 'Delhi'.
- ii) To display the details of products whose price is in the range of 50 to 100.
- iii) To display the Client\_Name, city from client table and Product\_Name and Price from table PRODUCT and CLIENT with their corresponding matching P\_ID.
- iv) To increase the price of all products by 10.
- v) To delete product whose P\_ID is FW12.
- vi) Add a new column mobile in a CLIENT table.
- vii) To insert a new product details as 'PF01', 'Perfume', 'PERF', 250
- viii) To count how many product are there in a PRODUCT Table.
- ix) To remove table CLIENT from database.
- x) Select sum(price) from Product;
- xi) Select \* from client order by city.
- xii) Select count (distinct city) from clients;

Write the output :

ix) To remove table CLIENT from database.

viii) To count how many product are there in a PRODUCT Table.

vii) To insert a new product details as 'PF01', 'Perfume', 'PERF', 250

vi) Add a new column mobile in a CLIENT table.

v) To delete product whose P\_ID is FW12.

iv) To increase the price of all products by 10.

iii) To display the Client\_Name, city from client and Product\_Name and Price from table

ii) To display the details of products whose price is in the range of 50 to 100.

i) To display the details of those clients whose city is 'Delhi'.



iii) State which is leading producer of cotton.

ii) Any million plus city.

i) State having higher gender ratio

21) a) In the political map of India, locate and label the following items :  $1 \times 5 = 5$

transition? What is the doubling time of world population?

20) What is physiological density? Define literacy. What is migration? What is Demographic

19) Write a note on Bengaluru - Chennai Industrial region. What is Golden quadrilateral?

18) Narrate history of International Trade.

17) Who is marginal worker? Name various classes & speech areas of modern Indian languages.

16) Define Human Development. What are different approaches of human development?

decrease?

15) Which 2 land use categories have shown increase and 3 land use categories which has shown

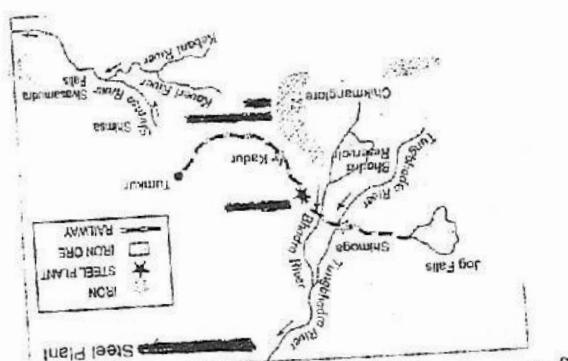
$(5 \times 7 = 35)$

decrease.

c) Name the hill range from where plant is getting iron ore.

b) Name the place where the plant is situated

a) Name the steel plant



13) Based on the map given below, answer the following questions :  $1 \times 3 = 3$

12) What are the factors affecting mining?

11) How minerals can be conserved?

10) Write a note on Panama Canal.

9) What are different types of farming?

8) What is difference between growth and development?

7) What is conurbation?

6) What is digital divide?

5) What is actual growth of population?

4) What are petrochemical industries?

3) What is pink collar job?

2) What is open sky policy?

1) What is Nomothetic?

$(3 \times 6 = 18)$

5

$(1 \times 7 = 7)$

3. Maps provided must be attached within the answer script.

2. There are in all 21 questions and marks allotted to each questions is written against it.

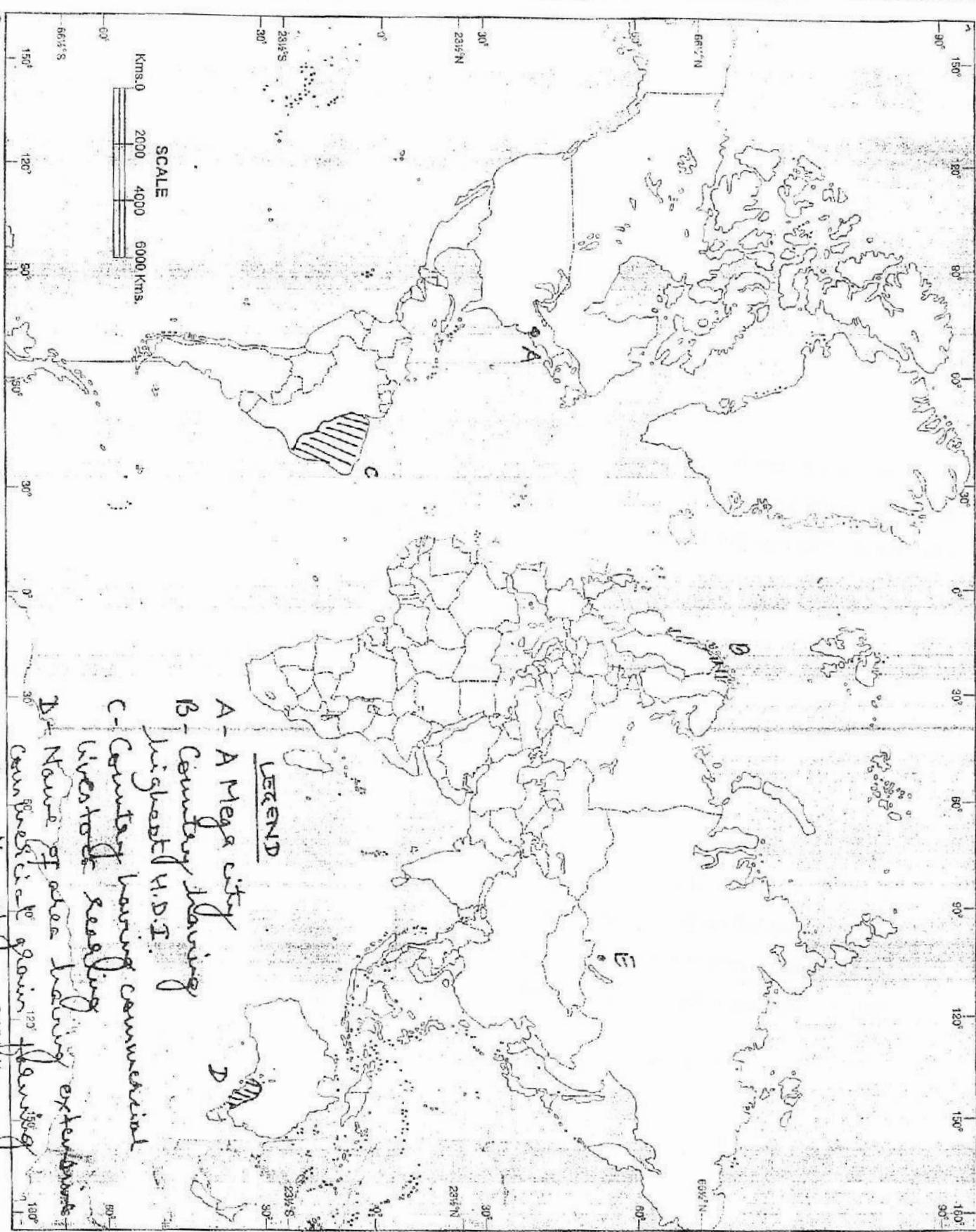
1. All Questions are compulsory.

#### General Instructions -

- iv) Terminal cities of North-South Corridor  
 v) Headquarter of northern frontier railway zone.  
 21) b) In political map of World, identify the following items marked as A,B,C,D & E.

1×5=5

## THE WORLD - POLITICAL



NAME ..... STD ..... SEC ..... TEACHER'S SIGNATURE .....

\*\*\*\*\*

- 1) What is satiety value?
- 2) Write the name of an adulterant used to adulterate mustard oil. Write its hazards.
- 3) What do you understand by hoarding of commodities?
- 4) Where can we file complaint if the product does not live upto the advertisement.
- 5) What is true bias?
- 6) What is the role of surfactants and active ingredients in detergents?
- 7) What do you understand by adequacy of meal?
- 8) What is FSSAI? Write briefly.
- 9) What could be four possible unhygienic practices adopted by roadside vendors selling eatables.
- 10) Make a chart to show Redressal system under COPRA.
- 11) Classify designs & explain.
- 12) What special care must be taken while storing woolen and cotton fabrics?
- 13) Classify stains and write two examples each.
- 14) What is oral rehydration therapy?
- 15) Explain the following terms:
- a) overdraft facility b) Debiture c) Recurring Deposit Account.
- 16) Write special dietary requirements during a) Fevers b) Hypertension
- 17) What are physiological and clinical changes visible in Diabetic condition?
- 18) Explain the types of real income giving suitable examples.
- 19) Rights & responsibilities of consumers go hand in hand. Do you agree? Explain.
- 20) What do you understand by the term Rhythm in an apparel?
- 21) Will you check workmanship in your ready made uniform?
- 22) Correlate type of occupation and Calorie requirements.
- 23) Your brother wants to invest one lakh rupees. Suggest any two schemes which are safe and also provide tax rebate. Mention 3 other features of each of these two schemes.
- 24) Write general method of stain removal.
- 25) What is the hot process of soap making?



**General Instructions:**

- The question paper consists of 26 questions.
- All questions are compulsory.
- Answers to questions carrying 1 mark should be in approximately 20 - 30 words.
- Answers to questions carrying 3 marks should be in approximately 80 - 90 words.
- Answers to questions carrying 5 marks should be in approximately 150 - 200 words.



- 1) Who presided over the first meeting of the Indian Constituent Assembly?  
 a) Dr. Rajendra Prasad    b) Sachidananda Sinha  
 c) B.R. Ambedkar    d) H.V. Kamath
- 2) In which year Fundamental Duties of citizens were introduced by 42<sup>nd</sup> Amendment?  
 a) 1975    b) 1976    c) 1977    d) 1980
- 3) Who was the first woman to become the Prime Minister of a country?  
 a) Golda Meir    b) Margaret Thatcher    c) Indira Gandhi    d) Sirimavo Bandaranaike
- 4) The first Law Minister of Independent India was  
 a) M.C. Stalwar    b) B.R. Ambedkar    c) Kailashnath Kartikeya    d) Rafi Ahmad Kidwai
- 5) Rajya Sabha enjoys more power than the Lok Sabha in the case of  
 a) Money Bills    b) Non-Money Bills  
 c) Setting up of new All India Services    d) Amendment of the Constitution
- 6) Who has the right to transfer any case anywhere in India?  
 a) President    b) Supreme Court    c) High Court    d) None of these
- 7) The implementation of Jawahar Rozgar Yojana rests with  
 a) Gram Panchayat    b) District Collector    c) State Government    d) Union Government
- 8) Who appoints the Union Public Service Commission?  
 a) Parliament    b) President    c) Chief Justice of India    d) Selection Committee
- 9) The Indian Constitution recognizes minorities on the basis of  
 a) Religion    b) Caste    c) Colour  
 d) Percentage of the population of the group to the total population
- 10) When was the Planning Commission established?  
 a) 10<sup>th</sup> March, 1950    b) 15<sup>th</sup> March, 1950    c) 20<sup>th</sup> March, 1950    d) None of these
- 11) Which of the following books was banned by all Muslim countries, including India?  
 a) 10<sup>th</sup> March, 1950    b) 15<sup>th</sup> March, 1950    c) 20<sup>th</sup> March, 1950    d) None of these
- 12) Who wrote the Book titled 'Rus and Ruins'?  
 a) Kapil Dev    b) Irmam Khan    c) Sunil Gavaskar    d) None of these
- 13) Who is known as the 'Iron Man of India'?  
 a) Jawaharlal Nehru    b) Bal Gangadhar Tilak    c) Sardar Vallabhbhai Patel  
 d) Mahatma Gandhi
- 14) Who was the first woman President of the Indian National Congress?  
 a) Annie Besant    b) Sarojini Naidu    c) Vijayalaxmi Pandit    d) None of these

**General Instructions:**

|                                           |                                  |                 |
|-------------------------------------------|----------------------------------|-----------------|
| DATE : 07-09-2015                         | FIRST TERMINAL EXAMINATION, 2015 | TIME : 90 min.  |
| CLASS : XII                               | GENERAL KNOWLEDGE                | NAME : _____    |
| CLASSTIME : 100                           | ROLL NO. _____                   | CLASS/SEC _____ |
| <b>DELHI PUBLIC SCHOOL, BHILAI (C.G.)</b> |                                  |                 |

- Write the correct option in the box provided.
- Each question carries one mark.
- All the questions are compulsory.

- 15) Who is known as 'Little Corporal'?  
a) Adolf Hitler b) Napoleon Bonaparte c) William E. Gladstone d) None of these
- 16) Mother Teresa was born in  
a) Switzerland b) India c) Germany d) Albania
- 17) Mrs. Vijyalaxmi Pandit was the first woman to become  
a) Chief Minister of State b) Minister of State   
c) Member of the Lok Sabha d) Member of the Rajya Sabha
- 18) Which religion is said to have no sacred text?  
a) Taoism b) Shintoism c) Confucianism d) Judaism
- 19) Who is said to be the father of Modern Olympics?  
a) Robert Dover b) Pierre de Coubertin c) Theodosius I d) Ernest Curtis
- 20) Which coloured ring represent the Asian Continent in the Olympics Emblem?  
a) Blue b) Yellow c) Red d) Green
- 21) What was the former name of Reliance Cup?  
a) Uber Cup b) Thomas Cup c) Rothman Cup d) Prudential Cup
- 22) Which of the following pairs is not correct?  
a) Deodhar Trophy : Hockey b) Irani Cup : Cricket   
c) Jules Rimet Cup : Football d) Corbillan Cup : Table Tennis
- 23) ISRO stands for :  
a) International Scientific Research Organisation  
b) Indian Salt Research Organisation  
c) Indian Space Research Organisation d) International Space Research Organisation
- 24) 'Lufthansa' is the name of Airline of  
a) Russia b) USA c) Malaysia d) Germany
- 25) The deepest lake in the world is  
a) Red Sea b) Dal lake c) Caspian Sea d) Baikal
- 26) Which Newspaper does not belong to London?  
a) New Statesman b) The Guardian Weekly c) Dawn d) The Times
- 27) Where is Red Square situated?  
a) Kashmir b) Moscow c) China d) New York
- 28) The boundary line between India and China is called  
a) MacMohan Line b) Durand Line c) Red Line d) Red Cliffe Line
- 29) Zanzibar is known as –  
a) Island of Spice b) Island of cloves c) Island of flavour d) Town of food specialities
- 30) The last ruler of Mughal dynasty was  
a) Babur b) Bahadurshah Zafar c) Akbar d) None of these
- 31) Chanakya was  
a) Prime Minster during Chandragupta Maurya's reign b) Also known as Kautilya   
c) Writer of famous treatise 'Arthashastra' d) All are correct
- 32) The last Hindu king who partly succeeded in establishing 'Hindu Swaraj' was  
a) Chatrapati Shivaji b) Akbar, the Great   
c) Chandragupta Maurya d) Bahadurshah Zafar Khan

- 33) Fa-hien was  
 a) 1<sup>st</sup> Buddhist pilgrim of China to visit India b) Discoverer of Puerto Rico and Jamaica  
 c) 1<sup>st</sup> Buddhist Pilgrim of India to visit China d) None of these
- 34) Who founded the Banaras Hindu University?  
 a) Martin Luther King b) Madam Mohan Malviya c) Marco Polo d) None of these
- 35) The 1<sup>st</sup> Indian actress to have been nominated to the Rajya Sabha was  
 a) Nargis Dutt b) Hema Malini c) Jaya Prada d) None of these
- 36) Which of the following metals do not form amalgam?  
 a) Zinc b) Copper c) Magnesium d) Iron
- 37) The substance used as an activator in float floatation process is  
 a) Pine Oil b) Potassium ethyl xanthate c) Copper Sulphate d) Sodium Cyanide
- 38) Silicon is main constituent of  
 a) Rocks b) Alloys c) Animals d) Plants
- 39) Pyrolytic is  
 a)  $MnO_2$  b)  $Mn_2O_3$  c)  $MnO_2$  d)  $SnO_2$
- 40) Which is the most active metal among the following?  
 a) Al b) Cu c) Sn d) Zn
- 41) Silver is present in  
 a) Al b) Cu c) Ni d) Pb
- 42) Metal which forms coloured chloride is  
 a) Limonite b) Purpurite c) Magnetite d) Dolomite
- 43) Which of the following metals is present in brass, bronze and German silver?  
 a) Cu b) Mg c) Al d) Na
- 44) Which of the following transition elements is synthetic?  
 a) Pm b) Mo c) Te d) Re
- 45) Inorganic graphite is  
 a)  $B_3N_3$  b)  $SiC$  c)  $P_4S_3$  d)  $Fe(CO)_5$
- 46) Study of flower is called  
 a) Anthology b) Agrostology c) Phenology d) Polylogy
- 47) Tuberculosis is caused by  
 a) Virus b) Bacteria c) Protozoa d) Fungi
- 48) Botanical name of wheat plant is  
 a) Zea Maiz b) Oryza Sativa c) Triticum aestivum d) Hordeum vulgare
- 49) Roots develop from  
 a) Plumbule b) Radical c) Stem d) Leaf
- 50) Longest fibres are found in  
 a) Jute b) Cotton c) Sun Hemp d) Coir
- 51) Citrus canker is a  
 a) Species of lemon b) Mosaic disease c) A disease in Lemon d) None of these
- 52) Fliehless bird found in Newzealand is  
 a) Ostrich b) Albatross c) Kiwi d) Penguin
- 53) In whole body mass, the percentage of blood is

54) Which one of the following is considered as the easily digestable source of protein?

- a) Egg albumin b) Soyabean c) Fish d) Red meat

55) During sleep the blood pressure –

- a) Increases b) Decreases c) Remain same d) First decreases and then increases

56) A fuse wire is made of

- |                                  |                                    |
|----------------------------------|------------------------------------|
| a) an alloy of tin and copper    | b) an alloy of tin and lead        |
| c) an alloy of tin and aluminium | d) an alloy of nickel and chromium |

57) A permanent magnet repels

- a) ferromagnetic substances only b) diamagnetic substances only
- c) paramagnetic substances only d) both paramagnetic & diamagnetic substances

58) How many image can a man see, if he stands between two plane mirrors inclined at an angle of  $60^\circ$

- a) 3 b) 4 c) 5 d) 6

59) Rainbow is formed due to a combination of –

- a) dispersion and total internal reflection b) refraction and absorption
- c) dispersion and focusing d) refraction and scattering

60) Myopia is due to

- a) shortening of eye ball b) older age c) elongation of eye ball
- d) irregular changes in focal length of eye lens

61) Sonar is based on the principle of -

- a) echo b) resonance c) reverberation d) none of these

62) The Doppler's effect is applicable for

- a) Light wave b) Sound wave c) Space wave d) both a and b

63) When air is saturated, it cannot hold

- a) More air b) More water vapour c) More  $\text{CO}_2$  d) More  $\text{O}_2$

64) Device used to measure very high temperature is

- a) Pyrometer b) Thermometer c) Bolometer d) Calorimeter

65) Masses of stars and galaxies are usually expressed in terms of

- a) neutron mass b) earth's mass c) solar mass d) lunär mass

66) Tides are the rise and fall in the level of oceans and seas and are due to

- |                                                                                                  |                    |
|--------------------------------------------------------------------------------------------------|--------------------|
| a) gravitational pull of moon and the sun                                                        | b) sun             |
| c) centrifuged force set up by the rotation of the earth and the moon round their common centres | d) All are correct |

67) The International Date line roughly corresponds to the –

- a)  $180^\circ$  east – west meridian of longitude b)  $180^\circ$  east – west latitude
- c)  $0^\circ$  east – west latitude d) None of these

68) The densest of all the atmosphere layer is

- a) troposphere b) stratosphere c) mesosphere d) ionosphere

69) The 'Zodiac signs' are named after

- a) star signs b) ecliptic system
- c) the constellations through which the ecliptic passes d) None of these

- 70) Life is possible on earth because of  
 a) terrestrial atmosphere b) nature of composition of atmosphere  
 c) temperature control and shielding effect against the solar radiation d) all are correct
- 71) Greenwich Mean Time (GMT) is  
 a) the UK standard time b) based on the local time of the meridian passing through  
 c) the meridian near London (e) both (a) & (b) d) None of these
- 72) Equator is  
 a) an imaginary line of latitude that circles the globe in an east-west direction  
 b) lies exactly midway between the North & South poles  
 c) forms a plane than runs perpendicular to the earth's axis d) all of these
- 73) Which of the following is the world's longest road?  
 a) G.T. Road b) Broadway Street c) Pan-American Highway d) Monumental Axis
- 74) The world's largest airport is  
 a) King Abdul Aziz International Airport at Jeddah  
 b) International Airport at New York  
 c) International Airport at United States d) None of these
- 75) Sun rises in the east and sets in the west due to  
 a) Shape of the Earth b) Revolution of earth around the sun  
 c) Rotation of earth on its axis d) Movement of the sun
- 76) Viruses which are often transmitted by a floppy disc left in the floppy disk drive  
 a) Trojan Horse b) Boot-Sector c) Script d) Logic bomb
- 77) These servers store and manage files for the network users  
 a) Authentication b) Main c) Web d) File
- 78) These are specially designed computer chips that reside inside other devices, such as  
 a) Servers b) Embedded computers c) Robotic computers d) Main frames
- 79) The process of finding error in software is  
 a) Debugging b) Compiling c) Testing d) Running
- 80) Chip is a common nickname for a  
 a) Transistor b) Resistor c) Integrated circuit d) Semiconductor
- 81) The most frequently used instructions of a computer program are likely to be fetched  
 from
- 82) Personal logs or journal entries posted on web are known as  
 a) Listservs b) webcasts c) blogs d) subject dictionaries
- 83) Linux is an \_\_\_\_\_ operating system  
 a) Open-source b) Windows c) Microsoft d) Max
- 84) The Internet is  
 a) a large network of networks b) an internal communication system for a business  
 c) a communication system for the Indian Govt. d) None of these
- 85) These are the lists of commands that appear on the screen  
 a) GUIs b) Icons c) Menus d) Windows

- 86) Name the IAS topper (1<sup>st</sup> rank) of 2015.
- a) Nidhi Gupta b) Ira Singhal c) Vandana Rao d) Renu Raj
- 87) Who was the winner of French Open – 2015, Men's Singles Trophy?
- a) Ivan Dodig b) Marcelo Malo c) Stan Wawrinka d) Mike Bryan
- 88) Who was awarded the best performance in a leading role (female) in IIFA Awards 2015?
- a) Tabbu b) Shraddha Kapoor c) Kangana Ranaut d) Deepika Padukone
- 89) Who among the following is the 15<sup>th</sup> Prime Minister of India?
- a) Manmohan Singh b) Narendra Modi c) Atal Bihari Bajpayee d) None of these
- 90) Who is the Home Minister in the Union Cabinet of India?
- a) Sushma Swaraj b) Narendra Modi c) Rajnath Singh d) Arun Jetley
- 91) Who is the first Director General of Police in Chhattisgarh?
- a) Arun Kumar b) S.M. Shukla c) U.K. Sayal d) Satyanand Mishra
- 92) Padum Lal and Punna Lal Bakshi, the famous litterateur belong to which of the following districts of C.G.?
- a) Rajanandgaon b) Bilaspur c) Raipur d) Bastar
- 93) Where is the first Bio-Reserve Park of Asia located?
- a) Sarguja b) Raigarh c) Kanker d) Raipur
- 94) The lowest literacy percentage in C.G. is in the district.
- a) Dhamtari b) Kanker c) Bilaspur d) Dantewara
- 95) Which is the oldest temple of C.G.?
- a) Siddeshwar Temple b) Deorani – Jethani Temple  
c) Mahamaya Temple d) Lakshemashwar Temple
- 96) For the formation of C.G. state, the credit goes to
- a) Congress Party b) B.J.P c) B.S.P d) Samajwadi Party
- 97) Where is the match box factory in C.G. located?
- a) Raigarh b) Balaghat c) Chhindwara d) Bilaspur
- 98) Who among the following took the oath as the first Governor of C.G. State?
- a) Dinesh Nandan Sahai b) W.A. Sheshak  
c) K. Shankar Narayan d) Surjit Singh Barnala
- 99) How many districts are there in C.G.?
- a) 14 b) 16 c) 18 d) 20
- 100) Which soil is found most in C.G.?
- a) Red and Yellow soil b) Black soil c) Matasi soil d) Kanhar soil

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