### TCS TEST PAPER

### 1. The perimeter of a equilateral triangle and regular hexagon are equal.  Find out the ratio of their areas?

a. 3:2 b. 2:3 c. 1:6 d. 6:1

Answer: b

2. A girl entered a store and bought x flowers for y dollars (x and y are integers). When she was about to leave, the clerk said, “If you buy 10 more flowers I will give you all for  $2, and you will save 80 cents a dozen”. The values of x and y are:

a. (15,1) b. (10,1) c. (5,1)  
d. Cannot be determined from the given information.

Answer: c

3. What is the value of 77!\*(77!-2\*54!)^3/(77!+54!)^3+54!\*(2\*77!-54!)^3/(77!+54!)^3  
a. 77! - 54! b. 77! + 54! c. 77!^2 - 54!^2 d. 77!  
Answer: a

**4.** There are 16 teams divided in 4 groups. Every team from each group will play with each other once. The top 2 teams will go to the next round and so on the top two teams will play the final match. Minimum how many matches will be played in that tournament?

|  |  |
| --- | --- |
| a. 43 | b. 40 |
| c. 14 | d. 50 |

Answer: a

5. Three generous friends, each with some money, redistribute the money as follows: Sandra gives enough money to David and Mary to double the amount of money each has. David then gives enough to Sandra and Mary to double their amounts. Finally, Mary gives enough to Sandra and David to double their amounts. If Mary had 11 rupees at the beginning and 17 rupees at the end, what is the total amount that all three friends have?

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| --- | --- |
| a. 105 | b. 60 |
| c. 88 | d. 71 |

Answer: d

6. In this question, A^B refers to A raised to the power B.Ten tickets numbered 1, 2, 3, ..., 10.  Six tickets are selected at random one of a time with replacement.  The probability of the largest number appearing on the selected ticket is 7 is

|  |  |
| --- | --- |
| a. (7^6 +1)/10^6 | b. (7^6 - 6^6)/10^6 |
| c. (7^6+6^6)/10^6 | d. 6^6/10^6 |

Answer:b

7. University of Vikramsila has enrolled nine PhD candidates. Babu, Chitra, Dheeraj , Eesha, Farooq,Gowri , Hameed, Iqbal, Jacob.  
-Farooq and Iqbal were enrolled on the same day as each other, and no one else was enrolled that day.  
-Chitra and gowri were enrolled on the same day as each other, and no one else was enrolled that day.  
-On each of the other days of hiring , exactly one candidate was enrolled.  
-Eesha was enrolled before Babu.  
-Hameed was enrolled before Dheeraj  
-Dheeraj was enrolled after Iqbal but before Eesha  
-Gowri was enrolled after both Jacob and Babu  
-Babu was enrolled before Jacob  
Who were the last two candidates to be enrolled?  
a. Babu and Gowri b. Eesha and Jacob  
c. Babu and Chitra d. Gowri and Chitra  
Answer: d

8. A card from a pack of 52 cards is lost. From the remaining cards of the pack, two cards are drawn and are found to be both spade. Find the probability of the lost card being a spade.  
a. 10/50 b. 10/53 c. 11/50 d. 11/53  
Answer:c

9. Eesha has a wheat business.  She purchases wheat from a local wholesaler of a particular cost per pound.  The price of the wheat of her stores is $3 per kg.  Her faulty spring balance reads 0.9 kg for a KG.  Also in the festival season, she gives a 10% discount on the wheat.  She found that she made neither a profit nor a loss in the festival season.  At what price did Eesha purchase the wheat from the wholesaler ?  
a. 3 b. 2.5 c. 2.43 d. 2.7  
Ans: C

10. A man is known to speak truth 3 out of 4 times. He throws die and reports that it is a 6. The probability that it is actually a 6 is

a. 4/5 b.1/2 c.3/8 d. ¼

ans .c

11. Two equilateral triangle of side 12cm are placed one on top another, such a 6 pionted star is formed if the six vertices lie on a circle what is the area of the circle not enclosed by the Star?  
a)61  b)57 c)68  d)83

Ans .c

12. There are 4 different letters and 4 addressed envelopes.In how many ways can the letters be put in the envelopes so that atleast one letter goes to the correct address ?  
a)15          b)16            c)18                d)12

Ans. A

13. Suresh Raina and Gautam Gambhir after a scintillating IPL match decide to travel by cycle to their respective villages. Both of them start their journey travelling in opposite directions. Each of their speeds is 6 miles per hour. When they are at a distance of 50 miles, a housefly starts flying from Suresh Raina's cycle towards Gautam Gambhir at a relative speed of 17 miles per hour with respect to Raina's speed. What will be the time taken by housefly to reach Gambhir?  
a. 10 hrs b. 15 hrs c. 20 hrs d. 25 hrs

Ans.a

14. According to the stock policy of a company, each employee in the technical division is given 15 shares of the company and each employee in the recruitment division is given 10 shares.  Employees belonging to both committees get 25 shares each.  There are 20 employees in the company, and each one belongs to at least one division.  The cost of each share is $10.  If the technical division has 15 employees and the recruitment division has 10 employees, then what is the total cost of the shares given by the company?

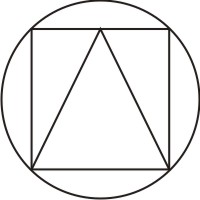
|  |  |
| --- | --- |
| a. 2650 | b. 3180 |
| c. 3250 | d. 3120 |

Answer: c

15. How many liters of a 90% of concentrated acid needs to be mixed with a 75% solution of concentrated acid to get a 30 liter solution of 78% concentrated acid?

|  |  |
| --- | --- |
| a. 3 | b. 4 |
| c. 6 | d. 10 |

Answer: c  
  
16. Find the ratio of the area of square to area of triangle. 

[](http://3.bp.blogspot.com/-mkgpWvoopNY/VfzktbLVulI/AAAAAAAAOAM/ZYtvMtQZVq0/s1600/Graphic1.JPG)

|  |  |
| --- | --- |
| a. 1:2 | b. 2:1 |
| c. 2:3 | d. 3:2 |

Answer: b

17. In this question A^B means A raised to the power B.  If f(x) = ax^4 - bx^2 + x + 5 and f(-3) = 2, then f(3) =

|  |  |
| --- | --- |
| a. 1 | b. - 2 |
| c. 3 | d. 8 |

Answer: d  
  
  
18. Of a set of 30 numbers, average of first 10 numbers = average of last 20 numbers.  Then the sum of the last 20 numbers is?

|  |  |
| --- | --- |
| a. Cannot be determined. | b. 2 x sum of last ten numbers |
| c. 2 x sum of first ten numbers | d. sum of first ten numbers |

Answer: c  
  
19. A play school has chocolates which can supply 50 students for 30 days. For the first ten days only 20 students were present. How many more students can be accommodated into the earlier group such that the entire chocolates get consumed in 30 days.  Assume each student takes the same number of chocolates.

|  |  |
| --- | --- |
| a. 45 | b. 60 |
| c. 55 | d. 70 |

Answer: a  
  
20. In the town of Unevenville, it is a tradition to have the size of the front wheels of every cart different from that of the rear wheels.  They also have special units to measure cart wheels which is called uneve.  The circumference of the front wheel of a cart is 133 uneves and that of the back wheel is 190 uneves. What is the distance traveled by the cart in uneves, when the front wheel has done nine more revolutions than the rear wheel?

|  |  |
| --- | --- |
| a. 570 | b. 1330 |
| c. 3990 | d. 399 |

Answer: c  
  
  
21. There are 20 persons sitting in a circle.  In that there are 18 men and 2 sisters.  How many arrangements are possible in which the two sisters are always separated by a man?

|  |  |
| --- | --- |
| a. 18!x2 | b. 17! |
| c. 17x2! | d. 12 |

Answer: a  
  
22.A number plate can be formed with two alphabets followed by two digits, with no repetition.  Then how many possible combinations can we get?

|  |  |
| --- | --- |
| a. 58500 | b. 67600 |
| c. 65000 | d. 64320 |

Answer: a  
  
23. A alone can do 1/4th of the work in 2 days.  B alone can do 2/3th of the work in 4 days.  If all the three work together, they can complete it in 3 days so what part of the work will be completed by C in 2 days?

|  |  |
| --- | --- |
| a. 1/12 | b. 1/8 |
| c. 1/16 | d. 1/20 |

Answer: a  
  
24. The shopkeeper charged 12 rupees for a bunch of chocolate. but i bargained to shopkeeper and got two extra ones, and that made them cost one rupee for dozen less then first asking price.  How many chocolates I received in 12 rupees ?

|  |  |
| --- | --- |
| a. 10 | b. 16 |
| c. 14 | d. 18 |

Answer: b

25. A series of book was published at seven year intervals.  When the seventh book was published the total sum of publication year was 13, 524.  First book was published in?  
a. 1911 b. 1910 c. 2002 d. 1932  
Answer: a  
26. In how many possible ways can write 3240 as a product of 3 positive integers a,b and c.  
a. 450 b. 420 c. 350 d. 320  
Answer: a

**27.** 100 students appeared for two examinations. 60 passed the first, 50 passed the second and 30 passed both. Find the probability that a student selected at random has failed in both the examinations?

|  |  |
| --- | --- |
| a. 1/5 | b. 5/6 |
| c. 1/7 | d. 5/7 |

Answer: a  
  
**28.** What is the greatest power of 143 which can divide 125! exactly

|  |  |
| --- | --- |
| a. 12 | b. 11 |
| c. 8 | d. 9 |

Answer: d  
  
**29.** Three containers A, B and C are having mixtures of milk and water in the ratio of 1:5, 3:5, 5:7 respectively.  If the capacities of the containers are in the ratio 5:4:5, find the ratio of milk to water, if all the three containers are mixed together.

|  |  |
| --- | --- |
| a. 53:115 | b. 53:113 |
| c. 54:115 | d. 54:113 |

Answer: a

30. Assume that f(1)=0 and f(m+n)=f(m)+f(n)+4(9mn-1).  For all natural numbers (Integers>0)m and n.  What is the value of f(17)?   
a. 5436 b. 4831 c. 5508 d. 4832  
Answer: d

\*31. In particular language if A=0, B=1, C=2,…….. ..     , Y=24, Z=25 then what is the value of  ONE+ONE (in the form of alphabets only)

a. BDAI   b. ABDI    c. DABI    d. CIDA  
Answer: a

32. Find the number of perfect squares in the given series 2013, 2020, 2027,................, 2300  (Hint 44^2=1936)

a. 1   b. 2    c. 3   d. Can’t be determined  
Answer: a

33. The rupee/coin changing machine at a bank has a flaw. It gives 10 ten rupee notes if you put a 100 rupee note and 10 one rupee coins if you insert a 10 rupee note but gives 10 hundred rupee notes when you put a one rupee coin!Sivaji, after being ruined by his rivals in business is left with a one rupee coin and discovers the flaw in the machine by accident. By using the machine repeatedly, which of the following amounts is a valid amount that Sivaji can have when he gets tired and stops at some stage (assume that the machine has an infinite supply of notes and coins):

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| --- | --- |
| a. 26975 | b. 53947 |
| c. 18980 | d. 33966 |

Answer: B

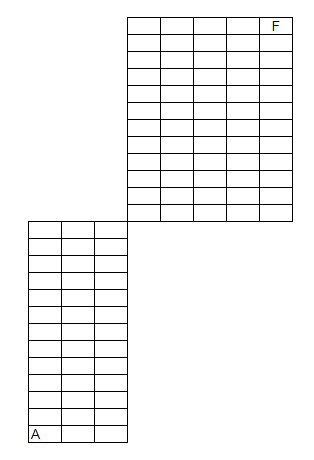
**34.** Seven movie addicts- Guna, Isha, Leela, Madhu, Rinku, Viji and Yamini attend a film festival. Three films are shown, one directed by Rajkumar Hirani ,one by S.Shankar,and one by Mani Ratnam. Each of the film buffs sees only one of the three films. The films are shown only once, one film at a time. The following restrictions must apply :- Exactly twice as many of the film buffs sees the S.shankar film as see the Rajkumar Hirani film.- Guna and Rinku do not see the same film as each other.- Isha and Madhu do not see same film as each other.- Viji and Yamini see the same film as each other.- Leela sees the S.Shankar film.- Guna sees either the Rajkumar Hirani film or the Mani Ratnam film.Which one of the following could be an accurate matching of the film buffs to films ?(A) Guna: the S.Shankar film; Isha: the Mani Ratnam film; Madhu: the S.Shankar film(B) Guna: the Mani Ratnam film; Isha: the Rajkumar Hirani film; Viji: the Rajkumar Hirani film(C) Isha : the S.Shankar film; Rinku: the Mani Ratnam film; Viji: the Rajkumar Hirani film(D) Madhu: the Mani Ratnam film; Rinku: the Mani Ratnam film; Viji: the Mani Ratnam film

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| --- | --- |
| a. A | b. C |
| c. D | d. B |

Answer: Option C

**35.** An ant starts moving on the mesh shown below along the wires towards a food particle.If the ant is at the bottom-left corner of cell A and the food is at the top-right corner of cell F, then find the number of optimal routes for the ant.

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| --- | --- |
| a. 13884156 | b. 3465280 |
| c. 4368 | d. 6748 |

Answer: B

**36.**Two consecutive numbers are removed from the progression 1, 2, 3, ...n.  The arithmetic mean of the remaining numbers is 26 1/4.  The value of n is

|  |  |
| --- | --- |
| a. 60 | b. 81 |
| c. 50 | d. Cannot be determined |

### Answer: C

### 37. A spherical solid ball of radius 58 mm is to be divided into eight equal parts by cutting it four times longitudinally along the same axis.Find the surface area of each of the final pieces thus obtained( in mm^2) ? (where pi= 22/7)

|  |  |
| --- | --- |
| a. 3365pi | b. 5046pi |
| c. 1682pi | d. 3346pi |

Answer: B

**38.** Professor absentminded has a very peculiar problem, in that he cannot remember numbers larger than 15. However, he tells his wife, I can remember any number up to 100 by remembering the three numbers obtained as remainders when the number is divided by 3, 5 and 7 respectively. For example (2,2,3) is 17. Professor remembers that he had (1,1,6) rupees in the purse, and he paid (2,0,6) rupees to the servant. How much money is left in the purse?

A. 59  B. 61  C. 49  D. 56  
Answer: D

**39.**Anand packs 304 marbles into packets of 9 or 11 so that no marble is left.  Anand wants to maximize the number of bags with 9 marbles.  How many bags does he need if there should be atleast one bag with 11 marbles

### a. 33 b. 32 c. 31 d. 30 Answer: B

### 40.  Find the number of zeroes in the expression 15\*32\*25\*22\*40\*75\*98\*112\*125

a. 12 b. 9 c. 14 d. 7  
Answer: B

**41.**Two identical circles intersect so that their centres, and the points at which they intersect, form a square of side 1 cm. The area in sq. cm of the portion that is common to the twocircles is:

a. (π/2) – 1 b. 4 c. √2 – 1 d. √5  
Answer:a

42. There is a 7-digit telephone number with all different digits.  If the digit at extreme right and extreme left are 5 and 6 respectively, find how many such telephone numbers are possible?

|  |  |
| --- | --- |
| a. 120 | b. 30240 |
| c. None of these | d. 6720 |

Answer: d

43. In a staircase, there ar 10 steps. A child is attempting to climb the staircase. Each time she can either make 1 step or 2 steps.  In how many different ways can she climb the staricase?  
a) 10 b) 21 c) 36 d) None of these

Ans: d

44. 2 gears one with 12 teeth and other one with 14 teeth are engaged with each other. One teeth in smaller and one tooth in bigger are marked and initially those 2 marked teeth are in contact with each other. After how many rotations of the smaller gear with the marked teeth in the other gear will again come into contact for the first time?  
a)7 b) 12  c) Data insufficient d) 84

Ans. : A

45. 4) A circular swimming pool is surrounded by a concrete wall 4 feet wide.if the area of the wall is 11/25 of the area of the pool, then the radius of the pool in feet is?

a. 25 b.20 c.15 d.30

ans .b

46. a, b, c are non negitive integers such that 28a+30b+31c = 365. a + b + c = ?  
a) Greater than 14 b) less than or equal to 11 c) 13 d) 12

Ans.d

47. If x^y denotes x raised to the power y, Find last two digits of (1141^3843) + (1961^4181)  
a) 02 b) 82 c) 42 d) 22

Ans. B

48. 9. For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A’s chances of winning. Let’s assume such rumors to be true and that in a match between Ghana and Bolivia; Ghana the stronger team has a probability of 2/3 of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?  
a) 1/9 b) 4/9 c) 5/9  d) 2/3

Ans. C

49. 11. There are two boxes, one containing 10 red balls and the other containing 10 green balls. You are allowed to move the balls between the boxes so that when you choose a box at random and a ball at random from the chosen box, the probability of getting a red ball is maximized. This maximum probability is

a. ½ b.1 c.14/19 d. none of these

ans. C

50. letters in the word ABUSER are permuted in all possible ways and arranged in alphabetical order then find the word at position 49 in the permuted alphabetical order?  
a) ARBSEU b) ARBESU c) ARBSUE d) ARBEUS

Ans. B

51 A call center agent has a list of 305 phone numbers of people in alphabetic order of names (but she does not have any of the names).  She needs to quickly contact Deepak Sharma to convey a message to him.  If each call takes 2 minutes to  complete, and every call is answered, what is the minimum amount of time in which she can guarantee to deliver the message to Mr Sharma.

a.  18 minutes  b.  610 minutes  c.  206 minutes  d.  34 minutes

ans. A

52. How many divisors (including 1, but excluding 1000) are there for the number 1000?

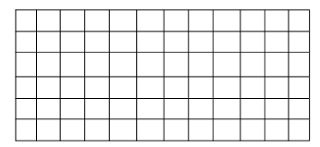
a.  15  b.  16  c.  31  d.  10

 ans . A

53. If the price of an item is decreased by 10% and then increased by 10%, the net effect on the price of the item is  
A. A decrease of 99% B. No change C. A decrease of 1% D. An increase of 1%

Answer: C

54..Find the number of rectangles from the adjoining figure (A square is also considered a rectangle)



A. 864 B. 3276 C. 1638 D. None  
Answer: C

55.If the base of a rectangle is increased by 10% and the area is unchanged, then the corresponding altitude must be decreased by :  
a. 9 1/11% b. 10% c. 11% d. 11 1/ 9%  
ans.: A

### 56. Find the probability that a leap year chosen at random will have 53 Sundays.

|  |  |
| --- | --- |
| a. 1/7 | b. 2/7 |
| c. 1/49 | d. 3/7 |

Answer: B

### 57. You need a 18% acid solution for a certain test, but your supplier only ships a 13% solution and a 43% solution. You need 120 lts of the 18% acid solution. the 13% solution costs Rs 82 per ltr for the first 67 ltrs, and Rs 66 per ltr for any amount in access of 67 ltrs. What is the cost of the 13% solution you should buy?

|  |  |
| --- | --- |
| a. 8002 | b. 7012 |
| c. 7672 | d. 7342 |

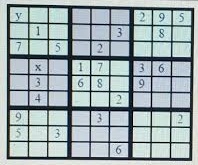
Answer: C

### 58. There is a lot of speculation that the economy of a country depends on how fast people spend their money in addition to how much they save.  Auggie was very curious to test this theory.Auggie spent all of his money in 5 stores. In each store, he spent Rs.4 more than one-half of what he had when he went in. How many rupees did Auggie have when he entered the first store?

|  |  |
| --- | --- |
| a. 248 | b. 120 |
| c. 252 | d. 250 |

Answer:a

### 59.  A sudoku grid contains digits in such a manner that every row, every column, and every 3x3 box accommodates the digits 1 to 9, without repetition.  In the following Sudoku grid, find the values at the cells denoted by x and y and determine the value of 6x + 15y.

[](http://2.bp.blogspot.com/-63V4Yiu6aRQ/Vd8c28CKMmI/AAAAAAAAM5k/pGCS6q33doA/s1600/unnamed.jpg)

|  |  |
| --- | --- |
| a. 87 | b. 75 |
| c. 66 | d. 99 |

Answer: B

### 60. a bb ccc dddd eeeee .........What is the 120th letter?

### a. m b. n c. o d. p

Answer:c