

## TCS Placement Paper

Time : 80 Minutes

1. The sum of first 40 terms 1,6,7,13,20 .... ?

its not a valid series ( dummy )

it will be 1, 7, 13, 20 ....

2. What will be the 55th word in the arrangements of the letters of the word PERFECT ?

CEPFERT

3. In how many ways can we arrange 7 different things to 3 people. All of them must get atleast one.

15 ways

4.  $(68-a)(68-b)(68-c)(68-d)(68-e) = 725$  ? Find  $a+b+c+d= ??$

232

5. A bus starts at 6:00 pm. from starting point at d speed if 18m/s. reached its destination. Waited for 40minutes. And again returned back at the speed of 28m/s. Find the time to reach the destination ?

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6. How many parallelograms are formed by a set of 4 parallel lines intersecting on other set of 7 parallel lines ?

126

7. If A works total in 10 days and B works total in 15 Days. If A+B of cost is Rs. 5000 then what is the share of B ?

2000

8. Remainder of  $2^{47}/47$  ?

2

9. How many arrangements will start and end with a vowel for TOGETHER ?

1080

10. IF  $X^Y$  denotes X raised to the power Y, Find the last two digits of  $(1941^{3843}) + (1961^{4181})$  .

82

11. When the number is written in base b, we have  $12 * 25 = 333$ . The value of b is ?

7

12. Find the 25th word if the word RANKED is arranged in dictionary order....

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AEDKNR

13. A completes 80% of a work in 20 days. Then B also joins and A and B together finish the remaining work in 3 days. How long does it need for B if he alone completes the work?

37 1/2

14. 302th of 1st year is saturday. What is the 15th day of 5th Year ?

Wednesday

15.  $1*1!+2*2!+3*3!+\dots+2012*2012!= ????$

2013!-1

16. There is a tank, and two pipes A and B. A can fill tank in 25mins and B can empty the tank in 20 minutes . If both the pipes are opened at same time. How much time required the tank can fill ??

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17. At the end of 1994 Rohit was half as old as his grandmother. The sum of the years in which they born is 3844. How old Rohit was at the end of 1999?

53 Years

18. A person starts writing all the 4 digits number , how many times he has written the digit 2 ?

3700

19. If the lcm of 2 natural numbers A and B is 1260, what is the minimum possible value of A+B ?

71

20. Let n be a natural number, then  $n(n*n-1)$  is always divisible by ?

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21. There is a circle with 2 triangles inscribed in it in opposite directions making a star. The triangle is equilateral of side 12. You have to tell the area of the remaining portion of the circle ?

22. For which of the following number  $2^{74} + 2^{2058} + 2^2$  a perfect square ?

a) 2012

b) 2100

c) 2010

d) 2010

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23. The last digit of the expression  $4+92+43+94+45+96+\dots+499+9100$  is ?

24.  $2^{74} + 2^{2058} + 2^{2n}$ . what is d value of n make it perfect square ??

25. If 50% of the 2:3 solution of milk and water is replaced with water. What is the concentration of the solution is required ?

26. 4kg of metal contains  $\frac{1}{5}$  copper and rest is zinc. Another 5 Kg of metal contains  $\frac{1}{6}$  of copper and rest is zinc. The ratio of copper and zinc into the mixture of these two metals ?

27. In what proportion water to be mixed with spirit to gain 12.5% by selling it at cost price ?

28. A number has exactly 3 prime factors, 125 factors of this number are perfect cubes, total how many factors does this number have ?

29. How many 8 digits numbers can be formed with repetition by using 1,2,3,4,5 which are divisible by 4 ?

30. In a race, Mohan beats Sohan by 40m and Sohan beats Rohan by 80m. Mohan beats Rohan by 104m. Find the length of the race in m ?

