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| **TCS Placement Paper December 2010:-  Writen Test:-**  Q 1: There are two water tanks A and B, A is much smaller than B. While water fills at the rate of 1 liter every hour in A, it gets filled up like, 10, 20, 40,80, 160…..in tank B. 1/8 th of the tank B is filled in 22 hours. What is the time to fill the tank fully?  a) 26 (b) 25 (c) 5 (d) 27  Ans: 22+log 2 base 8=22+4=26  Note: The question arise more than 1 time.  Ques 2: A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says 'At least n of the statements on this sheet are false.' Which statements are true and which are false? (a) The even numbered statements are true and the odd numbered are false. (b) The odd numbered statements are true and the even numbered are false. (c) The first 35 statements are true and the last 35 are false. (d) The first 35 statements are false and the last 35 are false.  Ans. c  Note: For this type of Questions, follow this: --At least- I'st half are true, Last half are false --Exactly- Last second one is true or (N-1)th Statement is true --Almost- All are true.  Ques 3: Unnecessary data. A lady has fine gloves and hats in her closet- 18 blue- 32 red , 10 white , 25 yellow, 55 purple, 30 orange. The lights are out and it is totally dark in spite of the darkness. She can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each color of blue, red, yellow?  (a) 59 (b) 8 (c) 50 (d) 42  Ans: a(32+25+2)  Note: For this type of questions: Bigger+Middle+1 (Suppose 18, 32, 25 =32+25+1), If you do not find answer in options, choose the one closer those the answer you got.  Ques4: The IT giant Tirnop has recently crossed a head count of 150000 and earnings of $7 billion. As one of the forerunners in the technology front, Tirnop continues to lead the way in products and services in India. At Tirnop, all programmers are equal in every respect. They receive identical salaries and also write code at the same rate. Suppose 12 such programmers take 12 minutes to write 12 lines of code in total. How long will it take 72 programmers to write 72 lines of code in total?  For this type question you should follow d step of basic math that will helpful you get enough time from  that. 12 prog 12 line 12 min 1 prog 12 line 12\*12 1 1 12\*12/12 72 1 12\*12/(12\*72) 72 72 12\*12\*72/(12\*72)  Ans:12  Note: This question appears 3 times in our question but app is different please follow basic rule think it it is very very easy.  Ques 5: 12 people {a1, a2, …, a12} meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs, {a1, a2}, {a2, a3}, …, {a11, a12}, {a12, a1}. Then size of the smallest set of people such that the rest have shaken hands with at least one person in the set is  (a) 12 (b) 4 (c) 18 (d) 11 Ans. B (N/3)  Ques 6: 10 suspects are rounded by the police and questioned about a bank robbery. Only one of them is guilty. The suspects are made to stand in a line and each person declares that the person next to him on his right is guilty. The rightmost person is not questioned. Which of the following possibilities are true? A. All suspects are lying. B. leftmost suspect is innocent. C. leftmost suspect is guilty  (a) A only (b) A or C (c) A or B (d) B only  Ans. c  Note: Remember it I don't know the logic  Ques 7: Alok and Bhanu play the following min-max game. Given the expression N = 15 + X\*(Y – Z) Where X, Y and Z are variables representing single digits (0 to 9), Alok would like to maximize N while Bhanu would like to minimize it. Towards this end, Alok chooses a single digit number and Bhanu substitutes this for a variable of her choice (X, Y or Z). Alok then chooses the next value and Bhanu, the variable to substitute the value. Finally Alok proposes the value for the remaining variable. Assuming both play to their optimal strategies, the value of N at the end of the game would be? Ans. 15+18 =33 Note: For this type of questions: x+y-z=11 x-y-z=2 x\*(y+z)=18  Ques 8: How many four digit numbers can be formed using the digits 1, 2, 3, 4, 5 (but with repetition) that are divisible by 4? Can you help Alok find the answer?  (a) 100 (b) 125 (c) 75 (d) 85  Ans:. 5^n-1= 5^4-1=125, n= no of digits  Ques 9 )The age of the two friends were in the ration of 6:5.If the sum of their ages is 66.Then after how many years their ratio will become 7:6?  a)11 b)6 c)10 d)12  Ques 10) The age of the two friends were in the ration of 2:3.If the sum of their ages is 55.Then after how many years their ratio will become 4:5?  a)11 b)33 c)22 d)44  Ques 11)A volume of 10936 l water is in a container of sphere.How many semisphere of volume 4l each will be required to tranfer all the water into the small semispheres?  a)2812 b)8231 c)2734 d)4222  Ques 12)A person ismanufacturing a house.He bought 20 ropes of wire which has a density of 300 Kg/m3.The height of the building to be constructed is 40 m.If the capacity of the current passed in the wire is 20 A and the voltage capacity is 80 Volts.Then what will be the opposing force to the current if the wire is used ?  a)2 b)4 c)8 d)1600  Ques 13)A horse chases a pony 2 hours after the pony runs.Horse takes 3 hours to reach the pony.If the average speed of the horse is 81Kmph.Then what is the average speed of the pony?  a)46.4 b)51 c)53.4 d)48.6  Ques 14)The difference between two no is 9 and the product of the two is 14.What is the square of their sum?  a)120 b)130 c)137 d)145  Ques 15) On planet korba, a solar blast has melted the ice caps on its equator. 9 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of circle, and the relationship between the diameter of this circle and the age of echina is given by the formula d = 4\*√ (t-9) for t ≥ 9 where d represents the diameter in mm and t the number of years since the solar blast.Jagan recorded the radius of some echina at a particular spot as 7mm. How many years back did the solar blast occur?  a) 17 b)21.25 c)12.25 d)14.05  Ques 16)A man goes 50Km north , then turned left walked 40Km, then turned right ? In which direction he is?  a)North b)South c)East d)West  Ques 16)In T.Nagar the building were numbered from 1 to 100.Then how many 4’s will be present in the numbers?  a)18 b)19 c)20 d)21  Ques 17)In T.Nagar the building were numbered from 1 to 100.Then how many 6’s will be present in the numbers?  a)18 b)19 c)20 d)21  Ques 18)In T.Nagar the building were numbered from 1 to 100.Then how many 1’s will be present in the numbers?  a)18 b)19 c)20 d)21  Ques 19)In T.Nagar the building were numbered from 1 to 100.Then how many 0’s will be present in the numbers?  a)18 b)19 c)20 d)11  Ques 20) Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 35 km/hr and the distance traveled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance.  20.72 b) 5.18 c) 238.25 d) 6.18  Ques 21) A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says ' At least n of the statements on this sheet are false. ‘Which statements are true and which are false?  a) The even numbered statements are true and the odd numbered are false. b) The odd numbered statements are true and the even numbered are false. c) The first 35 statements are true and the last 35 are false. d) The first 35 statements are false and the last 35 are false.  Ques 22) A man goes north 37km.turns left goes 2km.turns right goes 17km.turns right goes 2km. find distance b/w starting ending point.  a) 54 b) 27 c) 81 d) 67  Ques 23) If there are 30 cans out of them one is poisoned if a person tastes very little he will die within 14 hours so if there are mice to test and 24 hours to test, how many mices are required to find the poisoned can?  a) 3 b) 2 c) 6 d) 1  Ques 24) If a and b are mixed in 3:5 ration and b and c are mixed in 8:5 ration if the final mixture is 35 liters, find the amount of b?  A) 13.34 b) 15.73 c) 16.73 d) 9.45  Ques 25) If we subtract a number with y, we get 4 increase of number, once it got divided by y itself... Find that number??  A) 13 b) 12 c) 14 d) 11  Ques 26) It is the class with the seating arrangement in 4 rows and 8 columns. When the teacher says 'start' the girl who is sitting in first row and first column will say 1, then the next girl sitting behind her will say 4, the next girl sitting behind that girl will say 7, in a particular order each girl is telling a number, the following girls told 10, 13 next turn is yours what u will say?  a) 15 b) 17 c) 14 d) 16  Ques 27) It is dark in my bedroom and I want to get two socks of the same color from my drawer, which contains 24 red and 24 blue socks. How many socks do I have to take from the drawer to get at least two socks of the same color?  A) 2 b) 3 c) 48 d) 25  Ques 28) If the Valentine’s Day in 2005 falls on Monday, then on which day will the Valentine’s Day fall on 2010?  A) Saturday b) Thursday c) Wednesday d) Sunday  Ques 29). A person run from A to B.He took ¼ of the time less to reach B when compare to run at normal Speed.Then how many percentage he has increased his speed?  a)40 b)44.4 c)33.3 d)22.2  Ques 30). An athlete decides to run the same distance in 1/4th less time that she usually took. By how much percent will she have to increase her average speed?  a)40 b)44.4 c)33.3 d)22.2  Ques 31). In a building there are 5 rooms.Each having a equal area .The length of the room is 4m and breadht is 5 m.The height of the rooms are 2m.If 17 bricks are needed to make a square meter then how many bricks are needed to make the floor of a particular room?  a)320 b)380 c)340 d)300  Ques 32). One man want to build a wall .The length and breadth of the wall are 20 and 30 respectively. He need 35 bricks for one square centimeter then how many bricks he need?  a)21,500 b)30,000 c)21,000 d)20,000  Ques 33). In a hotel we can order two types of varities,but we can make 6 more variteis in home.One can choose the four varities with two from hotel as must.Find how many ways one can order.  a)14 b)15 c)56 d)28  Ques 34). If a pipe can fill the tank within 6hrs.But due to leak it takes 30 min more.Now the tank is full then how much time will it take to empty the tank throught the leak.?  a)78 b)56 c)66 d)59  Ques 35).The bacteria has the probability of split into 3 and probability to die is 1/3rd of the total bacteria.Let the probability is P.Some of them survived with probability 1/5.Then which among the following relation is true? a)P=1/3+1/5\*3 b)P=1/5\*(1/8-3)  Ques 36). There is a bacteria which has the probability of die 1/3 of its total number or it may tripled. Find out the probability  A. P=1/3+(2/3\*p^3) B. P=2/3+(2/3\*p^3) C. P=2/3+(1/3\*p^3) D P=2/3+(2/3\*p^3)  Ques 37) In T.Nagar the building were numbered from 1 to 100.Then how many 4’s will be present in the numbers?  a)18 b)19 c)20 d)21  Ques 38)Amrith told to Anand in front of a Photo that “He is the son of my father’s son”.Find who is in the picture if amrith have no brothers and sisters.  a)Amrith himself b)Amrith’s Uncle c)Amrith’s Father d)Amrith’s son  Ques 39) One person has no siblings and says,” the guy in the photo is the only son of my father ‘s son”. What is the relation of the guy to the person?  Ques 40) One grand father has 3 grand children two of the age difference is 3.Eldest child age is 3 times the youngest childs age and the eldest child age is two year more than the sum of other two children. Find what is the age of the elders child?  a)18 b)22 c)30 d)10. |
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