

TCS sample paper 2

AptitudeTest

- 1) 23 people are there, they are shaking hands together, how many hand shakes possible, if they are in pair of cyclic sequence.
- 2) 10men and 10 women are there, they dance with each other, is there possiblty that 2 men are dancing with same women and vice versa.
- 3) B is taller than j and 3 pillars. P is shorter than B and 2 pillars is j shorter/taller than P?
- 4) In school there are some bicycles and 4wheeler wagons. One Tuesday there are 58 wheels in the campus. How many bicycles are there?
- 5) Which is the smallest no divides 2880 and gives a perfect square?  
a.1 b.2 c.5 d.6
- 6) Rearrange and categorize the word 'RAPETKA'?
- 7) Key words in question (Fibonacci series, infinite series, in the middle of the question one number series is there. I got the series 3 12 7 26 15 b?
- 8) . What is the value of  $[(3x+8Y)/(x-2Y)]$ ; if  $x/2y=2$ ?
- 9) . There are two pipes A and B. If A filled 10 liters in hour B can fills 20 liters in same time. Likewise B can fill 10, 20, 40, 80,160. If B filled in  $(1/16)$  th of a tank in 3 hours, how much time will it take to fill completely?
- 10) ) There is a toy train that can make 10 musical sounds. It makes 2 musical sounds after being defective. What is the probability that same musical sound would be produced 5 times consecutively?
- 11) Six friends go to pizza corner there are 2 types of pizzas. And six different flavors are there they have to select 2 flavors from 6 flavors. In how many ways we can select?
- 12) 3, 15, x, 51, 53,159,161. Find X
- 13) A hollow space on earth surface is to be filled. Total cost of filling is Rs20000. The cost of filling per mt<sup>3</sup> is Rs 225 .how many times a size of 3 mt<sup>3</sup> soil is required to fill the hollow space?
- 14) There are different things like p,q,r,s,t,u,v. We can take p and q together. If r and s are taken together then t must has to be taken. u and v can be taken together.v can be taken with p or s. every thing can be taken together except  
a)p b)t c)v d)s

15) There are 11 boys in a family. Youngest child is a boy. Probability is 1 that of all are boys out of?

- a) 2    b) 2!    c) 2048    d) 1024

16) Given a collection of points  $P$  in the plane, a 1-set is a point in  $P$  that can be separated from the rest by a line, .i.e the point lies on one side of the line while the others lie on the other side.

The number of 1-sets of  $P$  is denoted by  $n_1(P)$ . The minimum value of  $n_1(P)$  over all configurations  $P$  of 5 points in the plane in general position(.i.e no three points in  $P$  lie on a line) is

- a)3    b)5    c) 2    d)1

17) The citizens of planet nigiet are 8 fingered and have thus developed their decimal system in base 8.

A certain street in nigiet contains 1000 (in base 8) buildings numbered 1 to 1000.

How many 3s are used in numbering these buildings?

- a) 54    b) 64    c) 265    d) 192

18) Given 3 lines in the plane such that the points of intersection form a triangle with sides of length 20, 20 and 30, the number of points equidistant from all the 3 lines is

- a)1    b)3    c)4    d)0

19) Hare in the other. The hare starts after the tortoise has covered  $\frac{1}{5}$  of its distance and that too leisurely<sup>3</sup>. A hare and a tortoise have a race along a circle of 100 yards diameter. The tortoise goes in one direction and the. The hare and tortoise meet when the hare has covered only  $\frac{1}{8}$  of the distance. By what factor should the hare increase its speed so as to tie the race?

- a) 37.80    b)8    c) 40    d) 5

20) Here 10 programers, type 10 lines with in 10 minutes then 60lines can type within 60 minutes. How many programmers are needed?

- a) 16    b) 6    c) 10    d) 60

21) Alice and Bob play the following coins-on-a-stack game. 20 coins are stacked one above the other. One of them is a special (gold) coin and the rest are ordinary coins. The goal is to bring the gold coin to the top by repeatedly moving the topmost coin to another position in the stack.

Alice starts and the players take turns. A turn consists of moving the coin on the top to a position  $i$  below the top coin ( $0 \leq i \leq 20$ ). We will call this an  $i$ -move (thus a 0-move implies doing nothing). The proviso is that an  $i$ -move cannot be repeated; for example once a player makes a 2-move, on subsequent turns neither player can make a 2-move. If the gold coin happens to be on top when it's a player's turn then the player wins the game. Initially, the gold coin is the third coin from the top. Then

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

22) For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumored that in a match between 2 teams A and B, Paul picks A with the same probability as A's chances of winning. Let's assume such rumors to be true and that in a match between Ghana and Bolivia, Ghana the stronger team has a probability of  $\frac{2}{3}$  of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game?

a)  $\frac{1}{9}$  b)  $\frac{4}{9}$  c)  $\frac{5}{9}$  d)  $\frac{2}{3}$

23) 36 people  $\{a_1, a_2, \dots, a_{36}\}$  meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs,  $\{a_1, a_2\}$ ,  $\{a_2, a_3\}$ , ...,  $\{a_{35}, a_{36}\}$ ,  $\{a_{36}, a_1\}$ . Then size of the smallest set of people such that the rest have shaken hands with at least one person in the set is

a) 12 b) 11 c) 13 d) 18

24) After the typist writes 12 letters and addresses 12 envelopes, she inserts the letters randomly into the envelopes (1 letter per envelope). What is the probability that exactly 1 letter is inserted in an improper envelope?

a)  $\frac{1}{12}$  b) 0 c)  $\frac{12}{212}$  d)  $\frac{11}{12}$

25) A can do a work in 15 days and B in 20 days. If they work on it together for 4 days, then the fraction of the work that is left is :

a)  $\frac{1}{4}$  b)  $\frac{1}{10}$  c)  $\frac{7}{15}$  d)  $\frac{8}{15}$

26) If VXUPLVH is written as SURMISE, what is SHDVD ?

27) If DDMUQZM is coded as CENTRAL then RBDJK can be coded as -----

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

29) Find the result of the following \_\_expression if, M denotes modulus operation, R denotes round-off, T denotes truncation:  $M(373,5)+R(3.4)+T(7.7)+R(5.8)$

30) Find the missing number in the series: 2, 5, \_\_, 19, 37, 75