Tata Consultancy Services  
  
TCS - Placement Paper - 23 Sep 06 - Bangalore  
  
The paper actually consisted of three sections namely,   
1) Verbal Reasoing   
2) Aptitude Reasoing   
3) Critical Reasoning.   
VERBAL SECTION:.   
Synonyms Antonyms   
1) Frugality 1) Harbinger   
2) Convene 2) Tantamount (Not equivalent)   
3) Balmy 3) Supernal   
4) Degraded 4) Ungainly   
5) Intractable 5) Unscathed   
6) Deluge 6) Boorish   
7) Intrepid 7) Transient   
8) Musty 8) Tenuous   
9) Repudiate 9) Incongruous   
10) Plagiarism 10) Parsimonious   
  
A passage was given which consisted of 10 blanks and we need to read the passage first and then fill the blanks with appropriate statements, which was given at the bottom of the page. (We have to be very fast in this section b’coz passage reading takes a lot of time.)   
  
APTITUDE SECTION:   
1.If g (0)=1,g (1)=1 and g (n)= g (n-1) + g (n –2). Find g (6).  
a) 9 b) 13 c) 21 d) 7  
  
2.A plane moves from 9°N60°E to 9°N60°W. If the plane starts at 2 AM and takes 10 hours to reach the destination, find the local arrival time.  
a) 4.30 AM b) 6.00 AM c) 4.00 AM d) 10.00AM  
  
3. Select the odd one out. a) Java b) Lisp c) Smalltalk d) Eiffel.  
a) Lisp. b) Java. c) Eiffel. d) Smalltalk.  
  
4. Select the odd one out  
a) Linux b) Oracle c) DB2 d) Ingress.  
  
5. Number of faces, vertices and edges of a cube  
a) 6,8,12 b) 8,12,8 c) 8,6,12 d) 12,8,6  
  
6. If M denotes modulus operation, R denotes round-off, T denotes truncation Find the value of the following expression :( 373,5)+R (3.4)+T (7.7)+R (5.8)  
a) 21 b) 16 c) 19 d) 13  
  
7. Which of the following are orthogonal pairs?  
a) 5i+3j b) i+j c) 3i-5j d) -7i+j  
A) (a)& (c). B) (b)&(d). C) (a)&(d). D) (c)&(d).  
  
8. Given the length of the 3 sides of a triangle. Find the one that is impossible?  
a) (5,5,11) b)(6,4,9) c)(4,3,8) d)(5,5,5)  
  
9. Find the singularity matrix from a given set of matrices? (Hint det (A)==0)  
a) 2 0 b) 5 -3 c) 4 6 d) 3 4  
3 5 - 5 3 3 7 2 0  
a) c b) a c) b d) d  
  
10.Match the following  
a) Sentence Paragraph 1) Not a type of  
b) Basmati Wheat 2) Siblings  
c) Brother Sister 3) A type of  
d) Cow Mammal 4) A part of  
A->4,B->1,C->2,D->3  
A->2,B->3,C->1,D->4  
A->3,B->4,C->1,D->2  
A->2,B->1,C->4,D->3  
  
11. Which of the following set of numbers has the highest Standard deviation?  
a) 1,0,1,0,1,0 b) -1, -1, -1, -1, -1, -1 c) 1,1,1,1,1,1 d) 1,1,0, -1,0, -1  
  
12. A building with height D shadows up to G. A neighbour building with what height shadows C feet.  
a) C/D\*G b) C+D/G c) C-D\*G d) (C\*D)/G  
  
13. A bus started from the bus stand at 8 AM and after staying 30 minutes at a destination returns back to the bus stand. The Destination is 27 miles from the bus stand. The Speed of the bus is 18mph. In the return journey the bus travels with 50% fast speed.  
At what time it is returns to the bus stand.  
a) 1 PM b) 12 PM c) 11 AM d) 10.30 AM  
14.Complete the series. 5,9,11,15, \_\_, 21,23  
a) 18 b) 19 c) 24 d) 17  
  
15. Which shape will be obtained by using these values of x, y?  
X Y  
0 0.00001  
10 1.02  
100 1.72  
1000 3.00  
  
16. If DPYGP is coded as BRAIN then EMXCT is coded as \_\_\_\_\_\_\_\_\_\_\_\_?  
a) CHAIR b) COBER c) COVER d) CEGER  
  
17. A can copy 50 papers in 10 hours while both A & B can copy 70 papers in 10 hours. Then for how many hours required for B to copy 26 papers?   
a) 13 hrs b) 18hrs c) 12hrs d) 15hrs.  
  
18. The size of a program is N and the memory occupied by the program is given by M = 4000sqr\_root(N). If the size of the program is increased by 1% then how much % increase is there in the memory?  
a) 0.22% b) 0.5% c) 0.8% d) 0.35%  
  
19. One year ago Pandit was three times his sister's age. He will be only twice her age next year. How old will Pandit be after five years?  
a) 8 b) 12 c) 11 d) 13   
  
20. A car is filled with four and half gallons of fuel for a round trip. If the amount of fuel taken while going is 1/4 more than the amount taken for coming, what is the amount of fuel consumed while coming back?  
a) Less than 2 gallons b) 2 gallons c) 2 1/2 gallons d) More than 3 gallons  
ANSWERS: 1) b 2) c 3) c 4) a 5) a  
6) c 7) a 8) d 9) c 10) a  
11) b 12) d 13) c 14) d 15)Y=Log10(X)  
16) c 17) a 18) b 19) c 20) b  
21).A, B and C are 8 bit no's. They are as follows:  
A -> 1 1 0 0 0 1 0 1  
B -> 0 0 1 1 0 0 1 1  
C -> 0 0 1 1 1 0 1 0 ( - =minus, u=union)  
Find ((A - C) u B) =?   
1.55 2.64 3.32 4. 53   
Ans:55   
hint:A-C is A intersection C bar first do negation of C then do A intesersection C   
  
22) The progam size is N.The memory occupied by the program is M=4000sqrt(N). If the program size is increased by 1%. Then what is the percentage increase in memory?   
1. 0.1% 2.0.4% 3.0.5% 4.2%   
Ans: 0.5%   
  
Approach: Sqrt of 101   
23). What is the unit of the following?   
(power\*time) / (velocity\*velocity)   
1.mass 2.distance 3.velocity 4.speed   
Ans:mass   
Approach: power=work/time   
hence numerator=(work\*time)/time=work   
work=Force\*distance   
Force=mass\*acceleration   
accelaration=distance/time^2   
  
  
now numerator is (mass\*distance^2) / (time^2)   
denominator is (distance^2) / (time^2) since velocity=distance/time   
24). What is the power of 2?   
a. 2068 b.2048 c.2668 ANS: (B). 2048   
  
25). Select the odd one out a. WAP b. HTTP c. BAAN d. ARP  
  
26).Find the value $%$(9) - %$%(9) Where $ means doubling and % means change of sign........   
1.38 2. -2 3. 50 4.-54   
Ans:-54   
Approach: (2)(-1)(2)(9) -(-1)(2)(-1)(9)   
  
27)ACUTE is coded as ZBTSD then DMFBS stand for. ANS: CLEAR   
28)In the following string find the occurrences of F followed by U but that is not followed by R.  
U F R U F D D Y W Z U U F F...............   
29)For temperature a function is given according to time : ((t\*\*2)/6) + 4t +12 what is the temperature rise or fall between 6.pm to 9 pm   
3 Questions based on Data Interpretations were asked. Among which  
A Venn diagram Problem(I don’t remember the figures).  
A Bar Chart Problem(Very Simple).  
References: For Aptitude section it is enough if we are thorough with all types of problems from R.S.Agarwal and refer previous question papers  
  
CRITICAL REASONING:   
Three Questions were given I don’t remember the exact questions. So I would like to only mention the type of questions, which I had.   
1) There were 3 cities namely A, B, C ( California ). Distance to each and the expense for taking each route was given. Costs were given in terms of dollars and cents (Relation b/w dollars and cents should be known.100cents=1$).   
Four Questions based on this was asked such as which is the shortest route, less expensive etc.   
  
2) There is a big University and a small college beside. Professors from University were M Senior Prof for Mathematics, J HOD of English Dept, L who knows Urdu and Professors from college were N who knows English well, D HOD of Latin Dept, and Y Senior Prof for Mathematics. There was a function to be conducted together by both the colleges and hence some conditions like   
Two Professors from the University has to be chosen.   
  
There cannot be Professors related to the same stream.   
Team should consist of three members.   
Four Questions based on the above part was given.   
3) Six children are selected for the chorus line in the school play: Andrea, Beatrice, Consuelo, Denise, Eve, and Florence . There are six positions in the line; numbered 1 to 6 from left to right. The order of the children in the chorus line is determined by the following rules:   
Florence cannot stand in position number 6   
Denise must stand immediately to the right of Consuelo   
Andrea cannot stand next to Beatrice   
Four Questions were based on their arrangements.   
4) Some Questions similar to this but not exact  
a)If all G’s are L’s, No K’s are M’s…….and questions on above conditions(Refer to Barron’s 15th edition)   
b) 2 groups Red and Brown , Marriage is not allowed in the same group…..similar to this…   
  
QUANTITATIVE APTITUDE   
  
1.In the word ORGANISATION if we exchange first with the second ,second with the third ,third with fourth and so on......till last then what will be the 10 letter from right?   
1.G 2.N 3.A 4.R   
Ans:A   
  
2.What is the largest prime no that will fit in 6 bit memory?   
1.65 2. 61 3. 67 4.63   
Ans: 61   
Approach: 2^6-1=63which is not prime   
and the no less than 63 is 61 which is a prime......   
4.In two dimensional array X(7,9) each element occupies 2 bytes of memory.If the address of first element X(1,1)is 1258 then what will be the address of the element X(5,8) ?   
1.1460 2.1365 3. 1356 4.1370   
Ans: 1365   
Approach:1258+(4\*9\*2)+(8\*2)   
5   
6.Which of the following highest Standard deviation  
a.7, 0, 7,0, 7,0 b) 7, 7, 7,7,7,7 c) -7, - 7, -7,-7,-7,-7 d) -7, 7, -7, 7,-7, 7   
Ans: d)   
  
7..g(0)= 1, G(1)=-1 ,G(N) = G(N-1)+G(N-2) , g(5)=?   
1. -2 2. 3 3. 1 4 0   
Ans: -2   
8.A power unit is there by the bank of the river of 900 mtr width. a cable is made from power unit to power a plant opposite to that of the river and 3000 mtr away from the power unit. The cost of the cable bellows water Rs5 / mtr and cost of cable on the bank is Rs 4/ mtr. Find the pt where the cable cut through the river.  
1.2800 2. 3000 3. 2100 4.3900   
Ans: 2100   
9.In madras, temperature at noon varies according to -t^2/6 + 4t + 12, where t is elapsed time. Find how much tem more or less in 6 pm to 9 pm .   
didn't get the correct ans........   
Approach: substitute the given values....   
( -6^2+4\*6+12)-(-9^2+4\*9+12)   
10.The size of the bucket is N kb. The bucket fills at the rate of 0.1 kb per millisecond. A programmer sends a program to receiver. There it waits for 10 milliseconds / and response will be back to programmer in 20 millisecond. How many much time the program takes to get a response back to programmer, after it is sent?   
Ans: 30 millisecond   
11.Which of the following are orthogonal pairs a) 3i+2j b) i+j c) 2i-3j d) 7i+j   
1.a&d 2.a&c 3.c&d 4.b&d  
Ans: a&c  
  
12.Which of the following do not form triangle? a)5,4,7 b) 3,4,7, c) 3,4,5 d) 1,8,5  
Ans: d)   
  
13.If A, B, C are the mechanisms used separately to reduce the wastage of fuel by 30%, 40%, 10%. What will be the fuel economy if they were used combine?   
1.68.4 2.62.2 3.58 4.27  
Ans: 62.2   
Approach: ( 70/100)\*(60/100)\*(90/100)\*100=37.8   
Economy=(100-37.8)=62.2   
  
14.My flight takes of at 2pm from a place at 18N 40E and landed 10 Hrs later at a place with coordinates 36N40W. What is the local time when my plane landed?   
1.8.00pm 2.6.00pm 3.12.00am 4.6.40pm  
Ans: 6.40 pm   
  
15.The number 384 in decimal system is given by (1432) x in the X System of numbers find the value of X a} 5 b) 6 c) 7 d) 8 e) 9   
Ans: a)   
  
17.WHICH SHAPE WILL BE OBTAINED BY USING THESE VALUES OF X ,Y  
X Y  
0 0.00001  
10 1.02  
100 1.72  
1000 3.00  
9999 4.72  
Ans: Y= log10(X)   
  
18. Number of faces, vertices and edges of a cube   
1.12,6,8 2.6,8,12 3.4 ,6, 8 4.8,12,6   
Ans: 6,8 , 12   
  
20.2 student get 3 and 3.5 in their class exam And 1.2 and 1.45 in final exam respectively . What might be the class marks of 3rd student who have got 0 marks in final exam?   
1.0.3 2.0.5 3.0.25 4.0.1   
ans: 0.25   
Approach: take the diff and find out  
  
1. Complete the series.  
26, 63, ----, 226..  
2. A set of angles for a triangle were given and I was asked to find which one does Not represent a triangle.  
3. in a two-dimensional array, X (9, 7), with each element Occupying 2 bytes of memory, with the address of the first Element X (1, 1) is 3000, find the ending address of X (8, 5).  
4. In the word ORGANISATIONAL, 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?  
5. Select the odd one out a. Oracle b. Linux c. Ingress d. DB2  
7. The size of a program is N. And the memory occupied by the Program is given by M = square root of 100N. If the size of The program is increased by 1% then how much memory now Occupied?   
8. A man, a woman, and a child can do a piece of work in 6 Days. Man only can do it in 24 days. Woman can do it in 16 Days and in how many days child can do the same work?  
9. Number of faces, vertices and edges of a cube  
10. Find the value of @@+25-++@16, where @ denotes "double" And + denotes "change of sign".  
11. 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 (5.4)  
12. A power unit is there by the bank of the river of 750 Meters width. A cable is made from power unit to power a plant Opposite to that of the river and 1500mts away from the power Unit. The cost of the cable below water is Rs. 15/- per meter And cost of cable on the bank is Rs.12/- per meter. Find the Total of laying the cable.  
13. Which of the following are orthogonal pairs?  
a. 3i+2j b.2i+j c. 2i-3j d. -7i+j  
  
14. If A, B and C are the mechanisms used separately to reduce the wastage of fuel by 30%, 20% and 10%. What will be the fuel? economy if they were used combined.  
15. A, B and C are 8 bit no's. They are as follows:  
A 1 1 0 1 1 0 1 1  
B 0 1 1 1 1 0 1 0  
C 0 1 1 0 1 1 0 1  
Find (A-B) U C.  
  
16. A Flight takes off at 2 A.M from northeast direction and travels for 11 hours to reach the destination which is in North West direction. Given the latitude and longitude of source and destination. Find the local time of destination when the flight reaches there?  
17. Find the singularity matrix from a given set of matrices?  
18. (Momentum\*Velocity)/ (Acceleration \* distance) find units.  
19. Which of the following set of numbers has the highest Standard deviation?  
7, 0, 7,0,7,0  
-7,-7,-7,-7,-7,-7  
7, 7, 7, 7, 7, 7  
7, 7, 0,-7, 0,-7  
  
20. Match the following.  
1. Brother - sister ---> a. Part of  
2. Alsatian - dog ---> b. Sibling  
3. Sentence - paragraph ---> c. Type of  
4. Car - steering ---> d. Not a type of  
Ans. 1-b, 2-c, 3-a, 4-d  
  
21. A question from Venn diagram. It was simple.  
22. A pie chart was given and a bar chart was given. 4 questions asked from that. (22-25 questions)  
26. G(0)=-1, G(1)=1, G(N)=G(N-1) + G(N-2), G(4)= ?  
27. What is the max possible 3 digit prime number?  
28. If TAFJHH is coded as RBEKGI then RBDJK can be coded as ......  
  
  
Fecundity  
Dissuade  
Felicitious  
Orthodox  
Genome  
Ciliated  
Chary  
Alacrity  
Asperity  
Austere  
Enconium  
Fulminate  
Testy  
Misanthrope  
  
A series question. Very simple as 16 19 15 ? 14 21 (don’t remember exactly)   
1. what is the largest prime no that is stored in 6 bit pattern.   
2. WHICH WILL GIVE GOOD STANDARD DEVIATION  
1. (7,0,-7,0,7) 2. (7,-7,7,-7,7) 3. (1,0,-1,0,1)   
3. WHICH IS NOT A SIDE OF A RECTANGULAR  
1. (2m, 3m, 4m ) 2. (3m, 4m, 7m ) 3. (3m, 5m, 9m )   
4. WHICH SHAPE WILL BE OBTAINED BY USING THESE VALUES  
OF X ,Y  
X Y  
0 0.00001  
10 1.02  
100 1.72  
1000 3.00  
9999 4.72   
5. which equation that best suits this curve a line cuts x at -1 when y=0 and x=0 when y=3 and goes upward   
6. A man , woman and a boy joindly did a job in 6 days. a man alone finishes in 10 days, a women alone finish in 24 days. then how many days the boy can take to finsh?   
7. An aeroplane starts from a (some latitude is given according to place)at 2 am local time to b(some latitude). travellling time is 10 hours. what is the local time of b when it reaches b.   
8. A file is transferred from a place to adestination capable of 10 kb. they given some rate of transfer. u have find a equation that best suit this.   
9. In a planar cube , the no. of vertices, no of edges and no of faces are 1. 6, 6, 6 2. 4, 8, 12 3. 8, 12, 6 4.........   
10. What is the value of m(373, 7) + r(6.8) -t(3.4) + r( 3.4) m- modulas r- roundoff t- truncate   
11. what is the value of #%#(5) + %%#(9) where % - square root #- square   
12. Match the following (don’t remember exactly but problem model is important) a b  
1. sentence, paragraph 1. type of  
2. basmati, wheat 2. a part of  
3. brother, sister 3. not a type of  
4. breigal, dog 4. sibling   
13. g (0) =1 g (1)= -1 if g (n)=g (n-1) + g(n-2) then what is the value of g (6)?   
14. A 0 0 0 0 1 1 1 1  
B 0 0 1 1 0 0 1 1  
C 0 1 0 1 0 1 0 1  
then find the decimal equivalent of ( a u b ) n c.   
15. Three schemes in a bank independently gives savings 10%, 20%, 25%. what will be the net saving if they are applied together?   
16. which one will be the exact power of 3  
(i) 2768 (ii) 2678 (iii) 2187 (iv) …   
17. A power unit is there by the bank of the river 750 mts. a cable is made from power unit to power a plant opposite to that of the river at 1500mts. the cost of the cable below water is rs. 15/- per meter ansd cost of cable on the bank is rs. 12/- per meter. then where they will cut   
18. odd man out 1.java 2.smalltalk 3.lisp 4.eiffel 5. c++   
19. which is the equation for given line among the 5 1. 2x +3y=4 2. x + y= -1 3. y=2x+ 3   
20. In which of the system 384 is equal to 1234? 1. base 5 2. base 6 3. base 7 4. base 8 5. base 9   
21. The size of a program is n. and the memory occupied by the program is given by m = square root of 100n. if the size of the program is increased by 1% then how much memory now occupied?   
22. calculate last address of array element column major a[2,3], array size a[7,9], each element occupies 8 bytes. start address is 3000.   
23. (force \* velocity)/ (mass \* acceleration) =  
1. velocity 2.time 3. acceleration 4.momentum   
24. In the word “unimpressive” if we change 1st & 2nd, 3rd & 4th, so on then will be 10th letter from right?   
Critical Reasoning   
  
1. A six floor building is given .there are 7 or 8 people .each floor contain two apartments. in each apart there can be at most 2 persons. some conditions are given as a is two floors above c and his room mate. etc. we have to determine the person what floors they are staying (reference 12 th barron)   
2. A and B are working at some place and are also the foreign agents of country C or D. it takes 4 days for docs to reach C and 5 to reach D. a stole a document on 19th and 22nd oct. b stole a document on 21st oct. they both mat for lunch on 20th oct. an agent of one country could not directly sent doc to another country on this based three questions were asked like if a worked for c then in how many days d will receive a document.