TCS Placement Paper- 2005

SECTION I

1. If VXUPLVH is written as SURMISE, what is SHDVD ?

Ans. PEASA (hint: in the first word, the alphabets of the jumbled one is three alphabets after the corresponding alphabet in the word SURMISE. S = V-3, similarly find the one for SHDVD)

2. If DDMUQZM is coded as CENTRAL then RBDJK can be coded as ---------

Ans. QCEIL (hint: Write both the jumbled and the coded word as a table, find the relation between the corresponding words, i.e C= D-1, N=M+1 & so on

3. 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?

Ans. word is CENOMOTEIRSC tenth word is R

4. 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)

Ans. 19

5. What is the largest prime number that can be stored in an 8-bit memory?

Ans.

6. Find the physical quantity in units from the equation:
(Force*Distance)/(Velocity*Velocity)

Ans. Ns^2/m

7. Find the value of @@+25-++@16, where @ denotes "square" and + denotes "square root".

Ans: 621

8. If f(0)=1 and f(n)= f(n-1)*n, find the value of f(4).

Ans: 24

9. Convert the decimal number 310 to the base 6.

Ans: 1234

10. Find the missing number in the series: 2, 5, __ , 19 , 37, 75

Ans: 9

11. In a two-dimensional array, X(9,7), with each element occupying 4 bytes of memory, with the address of the first element X(1,1) is 3000, find the address of X(8,5).

Ans.

12. Find the fourth row, having the bit pattern as an integer in an 8-bit computer, and express the answer in its decimal value.

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

(AU(B-C)) ?

Ans. 29

13. Complete the series 2, 7, 24, 77,__ (hint: 2*12= 24, 7*11= 77, therefore 24*10= 240)

Ans: 240

14. Consider the following diagram for answering the following questions:

A. Find the difference between people playing cricket and tennis alone.

Ans: 4

B. Find the percentage of people playing hockey to that playing both hockey and cricket.

Ans:

C. Find the percentage of people playing all the games to the total number of players.

Ans: 6%

15. One more question of the same type (Same type of diagram; of course in a different set)

1. How many more or less speak English than French?

2. What % people speak all the three languages?

3. What % people speak German but not English?

{In another set cricket, hockey and tennis are changed with the name of some computer languages, such as Java, Cobol, Fortran (may be some other name)}

16. Select the odd one out
a. Oracle *b. Linux* c. Ingress
d. DB2

17. Select the odd one out
a. SMTP b. WAP *c. SAP* d. ARP

18. Select the odd man out.
a. Java b. Lisp c. Smalltalk
d. Eiffel

19. Which of the following are orthogonal pairs?
a. 3i+2j b. i+j c. 2i-3j
d. -7i+j

20. Number of faces, vertices and edges of a cube
a. 12,8,6 b. 4,6,8 *c. 6,8,12*
d. 6,12,8

21. Given a Bar Chart showing the sales of a company. (In Figure) The sales in years as shown in the figure are (in crores) 1998-1999 - 130, 1997-1998 - 90, 1996-1997 - 90, 1995-1996 - 70

1. The highest growth rate was for the year
Ans. 1998-1999

2. The net increase in sales of the company in the year span of 1995-1999
Ans. 60 crores.

3. The lowest growth rate was for the year
Ans. 1997

22. Find the 566 value of the decimal number to the base 7.
Ans. 1436.

23. Complete the series:5,6,7,8,10,11,14,__.
Ans. 15

24. If the vertex (5,7) is placed in the memory. First vertex (1,1) ‘s address is 1245 and then address of (5,7) is ----------
Ans.

25. In which of the system, decimal number 384 is equal to 1234?
Ans.

26. 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?

Ans.

27. In Madras, temperature at noon varies according to -t^2/2 + 8t + 3, where t is elapsed time. Find how much temperature more or less in 4pm to 9pm.

Ans.

28. 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 milliseconds. How much time the program takes to get a response back to the programmer, after it is sent?

Ans.

29. 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 ?

Ans.

30. 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.

Ans. Rs. 22,500 (hint: the plant is on the other side of the plant i.e. it is not on the same side as the river)

{There are two questions, both showing a curve. In the first one, you have to identify the curve. In the second one you have to Write the equation of the curve. In }

SECTION II

1. If A can copy 50 pages in 10 hours and A and B together can copy 70 pages in 10 hours, how much time does B takes to copy 26 pages?

a. b. c. d.

2. Match the following:

1. Male - Boy	--->	a. A type of
2. Square - Polygon	--->	b. A part of
3. Roof - Building	--->	c. Not a type of
4. Mushroom - Vegetables	--->	d. A superset of

Ans: 1- d, 2- a, 3- b, 4- c

3. 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

Questions 20- 24 are based on the following passage:

The office staff of the XYZ corporation presently consists of three bookkeepers (A, B and C) and five secretaries (D, E, F, G and H). Management is planning to open a new office in another city using three secretaries and two bookkeepers of the current staff. To do so they plan to separate certain individuals who do not function well together. The following guidelines were established to set up the new office:

I. Bookkeepers A and C are constantly finding fault with one another and should not be sent as a team to the new office.

II. C and E function well alone but not as a team. They should be separated.

III. D and G have not been on speaking terms for many months. They should not go together.

IV. Since D and F have been competing for promotion, they should not be a team.

Ans.

4. If A is to be moved as one of the bookkeepers, which of the following cannot be a possible working team?

(a) ABDEH *(b) ABDGH* (c) ABEFH (d) ABEGH (e) ABFGH

5. If C and F are moved to the new office, how many combinations are possible?

(a) 1 (b) 2 (c) 3 (d) 4 (e) 5

6. If C is sent to the new office, which member of the staff cannot go with C?

(a) B *(b) D* (c) F (d) G (e) H

7. Under the guidelines developed, which of the following must go to the new office?

(a) B (b) D (c) E (d) G (e) H

8. If D goes to the new office which of the following is (are) true?

I. C cannot go.

II. A cannot go.

III. H must also go.

a. I only. b. II only. c. I and II only. *d. I and III only.* e. I, II and III.

9. Two stations A & B are 110 km apart. One train starts from A at 7 am, and travels towards B at 20kmph. Another train starts from B at 8 am and travels towards A at 25kmph. At what time will they meet?

a. 9 am *b. 10 am* c. 11 am d. 10.30 am

10. If a man can swim downstream at 6kmph and upstream at 2kmph, his speed in still water is:

a. 4kmph b. 2kmph c. 3kmph d. 2.5kmph

Answer the following three questions based on the paragraph:
A student applying at a college should take three courses. There are altogether four courses, namely, Science, Maths, Social Sudies and Economics. (The names may vary, but the pattern is the same)
One can take a Science course onty if he has taken a Maths course.
One can take a Maths course only if he has taken a Science course.
One can take a n Economics course only if he has taken a Social Studies course.

11. Which of the following is a possible course?

a. Two Science courses and a Social Studies Course.
b. Two Maths courses and an Economics course.
c. One Mats course, one Science course and a Social Studies course.
d. One Maths course, one Science course and an Economics course.

12. Which of the following courses a student can take?

I. One Science, one Social Studies, one Economics
II. Two Science, one Social Studies
III. Two Science, one Maths.

a. I only *b. III only* c. I and II only
d. II and III only

13. Which of the following is not a possible course?

a. Two Science courses and a Maths course. b. Two Maths course and a Science course.
c. One Maths course, one Science course and a Social Studies Course.
d. One Maths course, one Science course and an Economics course.

SECTION III

1. There are 9 people I, J, K, L, M, N, O, P and Q living in a five storied building. The top floor has only one room and all other floors have two rooms. No rooms are vacant. No rooms carry two people.

{ There are some conditions like the following }
K and N live on the same floor.
L is living in a floor lower than I.
Q is living in an upper floor than N.
O lives in the third floor.

{ Four questions are asked based on this paragraph regarding the floor a specific person lives on; some conditions given and to state which one is valid; some condition, based on which to state in which floor a specific person lives etc. }