

(Paper) : TCS Placement Paper Pattern 2007 At KOLKATA

 Paper : TCS Placement Paper

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  $9^{\circ}N60^{\circ}E$  to  $9^{\circ}N60^{\circ}W$ . 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) Lisp.
- b) Java.
- c) Eiffel.
- d) Smalltalk.

ANS: C

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

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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 from a given set of matrices?

(Hint  $\det(A) == 0$ )

a)  $\begin{pmatrix} 2 & 0 \\ 3 & 5 \end{pmatrix}$  b)  $\begin{pmatrix} 5 & -3 \\ 3 & 7 \end{pmatrix}$  c)  $\begin{pmatrix} 4 & 6 \\ 3 & 2 \end{pmatrix}$  d)  $\begin{pmatrix} 3 & 4 \\ 5 & 3 \end{pmatrix}$

$\begin{pmatrix} 3 & 5 & -5 \\ 3 & 3 & 7 \\ 2 & 0 & 0 \end{pmatrix}$

- 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) 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. 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.

12. The size of a program is N and the memory occupied by the program is given by  $M = 4000\sqrt{N}$ . 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%

13. What is the unit of the following?

$$(\text{power} \times \text{time}) / (\text{velocity} \times \text{velocity})$$

- 1. mass
- 2. distance
- 3. velocity
- 4. speed

Ans: 1. mass

14. 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

15. What is the largest prime no that will fit in 8 bit memory?

- 1. 253
- 2. 251
- 3. 255
- 4. 256

Ans: 251

16. 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)

17. 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

18. 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....

$$(-6^2+4*6+12)-(-9^2+4*9+12)$$

19. 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?

20. 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:  $(70/100) * (60/100) * (90/100) * 100 = 37.8$

$$\text{Economy} = (100 - 37.8) = 62.2$$

21. The size of a program is  $N$ . And the memory occupied by the Program is given by  $M = \text{square root of } 100N$ . If the size of The program is increased by 1% then how much memory now Occupied?

22. there were six ques from venn diagram...easy ones....

23. there was a small graph given u have to identify which trigonometric ratio is represented there...the options are

- 1)  $\cos x$
- 2)  $\tan x$
- 3)  $\sin x$
- 4)  $\sec x$

ANS: A