

## MU Sigma Placement Paper 2011

1. What is the output of the following code?

```
x=0;y=1;
for(j=1;j<4;j++){
x=x+j;
y*=j;
}
```

2. There is a 200 miles long tunnel. one train enters the tunnel at a speed of 200mph while the other trains enter the tunnel in the opposite direction at a speed of 1000 mph. A bee travels at a speed of 1500 mph enters the tunnel goes to and back until it reaches the train. What is the distance covered by the bee when the two train collides (the bee survives)

3. List the two advantages of views.

4. Which layer is encryption and decryption done

5. What are the various modes used to send data over the network

6. Write a query to display the name of the students whose total marks is divisible by 25 (total marks may be 175, 200, 150...)

7. P(S1)

a++;

P(S2)

v++;

V(S2)

V(S1)

P-wait, V-signal, S1 and S2 are semaphores. Consider two threads running. Is there a deadlock .If yes in which situation does the deadlock occur.

8. How do you find the port number of the remote host?

9. (Date; who)>logfile

Date; who>logfile

What is the difference between the two statements.

10. How do you find the machine MAC address

A) 0

B) 8

- C) 16
- D) 32

**Ans. A**

11. How many children did not try any of the rides. ?

- A) 5 B) 10 C) 15 D) 20

**Ans. 15.**

12. kids \* 3 rides = Rs. 60

$(55-20=)35$  kids \* 2 rides = Rs. 70

$60 + 70 =$  Rs. 130

So, Rs.  $(145 - 130 = )$  15 are left for the other  $(85 - 55 = )$  30 kids . so only 15 of them can take a ride and rest 15 will be left out.

145 rides were taken. 20 of them took all three, i.e. Rs. 60 were spent, so  $145-60=$  Rs. 85 are left for the others. Total kids were 85, so rest were 65. out of these 65,

12. How many children took exactly one ride?

- A) 5 B) 10 C) 15 D) 20

**Ans. 15**

13. Four cities are connected by a road network as shown in the figure. In how many ways can you start from any city and come back to it without travelling on the same road more than once ?

- A) 8
- B) 12
- C) 16
- D) 20

**Ans. 12.**

Consider the top city, the following are the 3 routes possible, starting from the leftmost edge. Since there are 3 edges emanating from each city and the figure is perfectly symmetrical, these 3 routes are possible from each edge, hence for any given city, the total number of routes =  $4 * 3 = 12$ .

14. Directions for question nos 14 to 15

A, B, and C are three numbers, Let  
 $@(A, B)$  = Average of A and B  
 $*(A, B)$  = Product of A and B  
 $/(A, B)$  = A divided by B

15 If  $A=2$  and  $B=4$  the value of  $@( / (* (A,B), B), A)$  would be

- A) 2
- B) 4
- C) 6
- D) 16

**Ans. 2**

16. Sum of A and B is given by

- A)  $*(@(A, B), 2)$
- B)  $/(@(A,B),2)$
- C)  $@(* (A,B),2)$
- D)  $@(/(A,B),2)$

**Ans. A.**

17. Let  $x < 0$ ,  $0 < y < 1$ ,  $Z > 1$  which of the following is false:

- A)  $(x^2 - z^2)$  has to be positive.
- B)  $yz$  can be less than one.
- C)  $xy$  can never be zero
- D)  $(y^2 - z^2)$  is always negative

**Ans. A.**

18. If A's income is 25% less than B's, by what % is B's income greater than that of A ?

- A) 35%
- B) 25%
- C) 30%
- D) None of these

**Ans. D.**

Directions for Questions Nos: 19 to 20

Kya-Kya is an island in the south pacific. The inhabitants of Kya-Kya always Answer any question with two sentences, one of which is always true and other is always false.

19 You are walking on a road and come to a fork. You ask the inhabitants Ram, Laxman, Lila, "Which road will take me to the village?"

Ram says, "I never speak to strangers. I am new to this place"

Laxman says, "I am married to Lila. Take the left road".

Lila says, "I am married to ram. He is not new to this place"

Which of the following is true?

- A) Left road takes you to the village
- B) Right road takes you to the village
- C) Lila is married to laxman
- D) None of above

**Ans. A.**

Ram said he never talked to strangers, but he spoke to a stranger, this means that this statement is false, hence his other statement must be true, hence the second statement of Lila is false, hence her first statement is true that is she is married to ram, hence the first statement of Laxman is false, hence his second statement is true, that is take the left road.

20. You find that your boat is stolen. You question three inhabitants of the island and they reply as follows:

John says, "I didn't do it. Mathew didn't do it"

Matthew says, "I didn't do it. Krishna didn't do it."

Krishna says, "I didn't do it .I don't know who did it."

Who stole your boat?

- A) John
- B) Matthew
- C) Krishna
- D) None of them.