

1.  $6 \times 12 \times 15$  is the volume of some material. How many cubes of edge 3 can be inserted into it ?  
 a. 20                                      b. 30                                      c. 40                                      d. 46

2. Two pipes can fill a tank in 10 and 12 hours respectively while third pipe will make the tank empty in 20 hours. If all three pipes operate simultaneously, in how many hours the tank will be filled ?

a. 11 Hrs                                      b. 9 Hrs 15 minutes                                      c. 8 Hrs                                      d. 7 Hrs 30 minutes

3. Cost of an item is x. It's value increases by p% and decreases by p% Now the new value is 1 rupee, what is the actual value ?

Ans.  $(1000)/(1000 - p \times p)$ .

4. A right circular cylinder and a cone are there. Base radius of cone is equal to radius of cylinder. What is the ratio of height to slant side if their volume are the same?

5. Distance between two poles is 50 meters. A train goes by 48 at a speed of kmph. In one minute how many poles will be crossed by the train ?

6. A pole seen from a certain distance at an angle of 15 degrees and 100 meters ahead by 30 degrees. What is the height of pole ?

7. For 15 people--each has to pay Rs.20. For 20 people--each has to pay Rs.18. For 40 people--how much has each to pay ?

8. If  $p=2q$  then  $q=r \times r$ , if p-odd then q is even, whether r is even or odd ?

- a) first condition is sufficient                                      b) second condition is sufficient  
 c) both are sufficient                                      d) both are not sufficient

9. If he sells 40 mangoes, he will get the selling price of 4 mangoes extra, What is his percentage increase in profit ?

a. 25%                                      b. 30%                                      c. 15%                                      d. 18%

10. 100 glasses are there. A servant has to supply glasses to a person If he supplies the glasses without any damage he will get 3 paise otherwise he will loose 3 paise. At the end of supplying 100 glasses if he gets 270 paise, how many glasses were supplied safely.

a. 100                                      b. 98                                      c. 95                                      d. 93

11. Q is not equal to zero and  $k = (Q \times n - s)/2$  find n?

(a)  $(2 \times k + s)/Q$                                       (b)  $(2 \times s \times k)/Q$                                       (c)  $(2 \times k - s)/Q$                                       (d)  $(2 \times k + s \times Q)/Q$  (e)  $(k + s)/Q$

Questions 12 - 16:

- A causes B or C, but not both
- F occurs only if B occurs
- D occurs if B or C occurs
- E occurs only if C occurs

J occurs only if E or F occurs  
 D causes G, H or both  
 H occurs if E occurs  
 G occurs if F occurs

12. If A occurs which of the following must occurs

- I. F & G                      II. E and H                      III. D  
 (a) I only                      (b) II only                      (c) III only  
 (d) I, II, III                      *(e) I, II (or) II, III but not both*

13. If B occurs which must occur

- (a) D*                      (b) D and G                      (c) G and H                      (d) F and G                      (e) J

14. If J occurs which must have occurred

- (a) E                      *(b) either B or C*                      (c) both E F                      (d) B                      (e) both  
 B and C

15. Which may occurs as a result of cause not mentioned:

- I. D                      II. A                      III. F  
 (a) 1 only                      (b) 2 only                      *(c) 1 and 2*                      (d) 2 and 3                      (e)  
 1,2,3

16. E occurs which one cannot occurs

- (a) A                      *(b) F*                      (c) D                      (d) C                      (e) J

## Technical

1. Which is the fastest logic ?

*Ans. ECL*

2. 202.141.65.62 type of IP address belong to which class ?

*Ans. class B*

3. Mod K ring counter requires how many number of flip flops ?

*Ans. K*

4. What is the ideal op-amp CMRR ?

*Ans. infinity.*

5. For a 13-bit DAC the MSB resistance is 2kohms. What is the LSB resistance ?

*Ans. 2 kohms \* 2<sup>12</sup>*

6. How many mod 3 counters are required to construct mod 9 counter.

*Ans. 2*

7. Piggy backing is a technique for

- a) Flow control                      b) Sequence                      *c) Acknowledgement*                      d)

## Retransmission

8. The layer in the OST model handles terminal emulation

- a) session                      *b) application*                      c) presentation                      d) transport

9. Long int size is

- a) 4 bytes                      b) 2 bytes                      *c) compiler dependent*                      d) 8 bytes

10. Find the output of <BR>

- printf("%d",x);                      x=2,y=6,z=6;< BR>                      x=y=z;
- a. 2                      *b. 6*                      c. 0                      d. error

11. FTP is carried out in \_\_\_\_\_ layer ?

- a.      b.      c.      d.

**Other questions** : Problem related to pointers. Refer Page.123 of C Programming, by Kernighan and Ritchie.

Few question related to C++