

## Lucent Sample Test Paper

### Aptitude

Q1.  $6 \times 12 \times 15$  is the volume of some material. How many cubes of edge 3 can be inserted into it?

Ans. 40

Q2. 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?

Ans. 7 hours 30 minutes.

Q3. Cost of an item is  $x$ . Its value increases by  $p\%$  and decreases by  $p\%$ . Now the new value is  $y$  rupee, what is the actual value?

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

Q4. 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 volumes are the same?

Q5. Distance between two poles is 50 meters. A train goes by at a speed of 48 kmph. In one minute how many poles will be crossed by the train?

Q6. A pole is seen from a certain distance at an angle of 15 degrees and 100 meters ahead by 30 degrees. What is the height of the pole?

Q7. 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?

Q8. If  $p = 2q$  then  $q = r$ , 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

Q9. If he sells 40 mangoes, he will get the selling price of 4 mangoes extra, What is his percent increase in profit ?

Ans. 25%

Q10. 100 glasses are there. A servant has to supply glasses to a person. If he supplies the glass without any damage he will get 3 paise, otherwise he will lose 3 paise. At the end of supplying 100 glasses, if he gets 270 paise, how many glasses were supplied safely.

Ans. 95

Q11. 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)  $(k + s)/Q$

Q12 - Q16

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

Q12. If A occurs which of the following must occur

- 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

Ans. (e)

Q13. If B occurs which must occur

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

Ans. (a)

Q14. 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

Ans. (b)

Q15. Which may occur as a result of cause not mentioned

- (1) D
  - (2) A
  - (3) F
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- (a) 1 only
  - (b) 2 only
  - (c) 1 and 2
  - (d) 2 and 3
  - (e) 1,2,3

Ans. (c)

Q16. E occurs which one cannot occur

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

Ans. (b)

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## **Technical**

Q1. Which is the fastest logic ?

Ans. ECL

Q2. 202.141.65.62 type of IP address belong to which class ?

Ans. class B

Q3. Mod K ring counter requires how many number of flip flops ?

Ans. K

Q4. What is the ideal op-amp CMRR ?

Ans. infinity.

Q5. For a 13-bit DAC the MSB resistance is 2kohms. What is the LSB resistance ?

Ans.  $2\text{kohms} * 2^{12}$

Q6. How many mod 3 counters are required to construct mod 9 counter.

Ans. 2

Q7. Piggy backing is a technique for

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

Ans. (c)

Q8. The layer in the OST model handles terminal emulation

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

Ans. (b)

Q9. Long int size is

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

Ans. (c)

Q10. Find the output of

```
x=2,y=6,z=6  
x=y=z;  
printf("%d",x);
```

Q11. FTP is carried out in \_\_\_\_\_ layer ?

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

Few question related to C++