

VERIZON

1. There were 36 chairs. how many ways can they be placed such that all rows have equal no. of chairs and atleast three chairs are there in each row and there are atleast three rows.

5 ways.

2. There are 27 balls, of which 1 is heavier. given a balance how many times you need to weigh to find out the odd ball.

3 Weighs.

3. Product of three consecutive nos. 210. What is the sum of two least numbers

11

4. If the area of the square is increased by 69 % how much the length of the side will increase?

30%

5. if the sum of five consecutive nos. 35? how many prime nos are there :

2 primes.

6. if the length of the rectangle is reduced by 20% and breath is increased by 20 % what is the net change ?

4 % decrease

7. A question on sets. There are some 20 Basketball players & 30 Football players, and 25 cricket players. 1 of them plays all the three games. 8 of them plays atleast two games. They are 50 altogether. How many of them plays none of the games.

8. A question on directions. B is 20 miles east of A. D is 30 miles east of C. E is 10 miles north of D. C is 20 miles north of B. How far E is from A? Some 3 questions on Reasoning like,

9. If you say that giving stock options to employees increases the productivity of the company, which of the following sentences support it. A) Giving stock options increases the morale of the employees

Technical

1. A Circuit with nand gates. (ans. may be XOR)

2. CMRR. relates to (options not in order)

voltage follower

non inverting amplifier

inverting amplifier

integrator

3. Given a circuit , give the output.

(ans. may be triangular wave.)

4. o/p of an assembly code.

multiply by 11.

5. how to handle asynchronous events.

a) polling

b) interrupt

etc.

6. Whether all recursive program can be written iteratively?

7. What data structures you will use if you want to go to first record from the last and vice versa?
doubly linked circular list

8. Given 10000 nos. and 48MB Memory. What is the complexity of the efficient sorting algo.? (the algo. is not mentioned) $O(N)$

9. Given a C code and ask what it does?
code was something similar to Bubble sort and that particular code does the sorting in Descending order and the complexity is $O(n^2)$ (which is the next question).

10.

A code like this is given.

a. for($i=0$; $i<num$; $i++$)

b. for($i=num$; $i>0$; $i--$)

Assuming no code optimization and assume that the microprocessor has flags etc. which one is correct.

b will execute faster.

11. If there are too many page faults what is the problem?

12. To ensure one pgm. doesn't corrupt other pgm. in a Multi-pgm environment what you should do?

13. Which one you will use to implement critical section?
Binary Semaphore

14. Which one is not needed for Multi-processing. environment?
options are: virtual memory, security, time sharing, none of the above.

15. Which one is not done by Data link layer ?
bit stuffing, LRC, CRC, parity check

16. Which one is not related to Data link layer?

17. Which one is not suitable for client-server application?
tcp/ip, message passing, rpc, none of the above.

18. What is SQL.
Procedural Relational DB Query Language.

19. Indexing in databases give you options were like 1. efficient deleting and inserting
2. efficient deleting.

etc.

20. `int a=1, b=2, c=3;`
`printf("%d,%d", a, b, c);`

What is the output?

21. Scope of Static Variable
in a file.

22. `for(i=0; i<=10; i++, printf("%d", i));` +- (+- is there in the questions)

23. Real Time Os should have

- a) fast context switch
- b) Virtual memory etc.

24. Messages are transferred in some E71 code, where after 7 bits of data, 1 bit of stopping data is to be transferred. what should be done.

options were like

- a) send directly
 - b) send after encoding
- etc.

25. There are three processes A, B, C. A sends data to B. B removes the header stores it and sends the data to C. C returns it to B. B receives the message, identifies the message and adds the header that was stored and sends to A. B receives the messages from C such that atmost 'm' messages B are pending. Identify the best Data Structure.

26. A question in compiler about the heap and stack allocation of memory.

27. struct

```
{  
char a[3];  
int b;  
}x;  
char *cp;
```

- a) size of x is 7.
 - B
 - b)
 - c)
 - d) cp takes the size of a pointer.
- (d) is the ans.

28. a logic ckt is given and asked to identify the configuration.

ans: XOR.

29. multi vibrator with nor gates is given

ans: astable multi sqr wave opt.

30. 4 stage ripple counter with delay(f/f) 10msec. How much time it takes for a state to change. $4 \times 10 = 40$.

31. impedance of a p'lel resonant circiut at resonance: R.

32. serial to parellel conversion is done by ans: shift register.

33. if the address bus id 20bits. then the memory space is 1Mb.

34. filtering can be done with: capacitor, iductor, both, none.

35. the config that is worst effected by low CMMR

ans: Non inverting amplifier.

36. two progs are given. one satrts counting frm 0 to MAX and the other stars frm MAX to 0. which one executes fast. may be Max to 0. Think of. it should be.

37. the fctn of datalink layer is: bit stuffing.

38. which of the following is not fctn of datalink layer: Encryption.

39. voltage levels of rs232x: +12, -12.

40. which of the following is not used for client/server. RPC, TCP/IP, MESSAGEQs None

ans: may be none.

41. which of the following is true.

ans: the primary key in DataBase design is very important.

42. SQL is a Non procedural query langauge.

43. Data structure used to implement a menu: doubly linked circular linked list.
44. some regular expression is given: `WaW'`. may be it is context free grammar.
45. the feature of real time os is: fast context swithing.
46. os impliments protection with the help of hardware (like virtual addressing in 386/286 etc).
47. what is a real time system.
48. name some real time OS
49. what are the characteristics of Real time OS.
50. is DOS a real time OS.
51. what is a kernel, shell.
52. what is binary search, traversal, hashing etc.
53. given a scenario what is the suitable data structure.
54. write a code to count the no. of 1's in a binary rep. of a number. memory taken for `char *`, `int *` etc.
55. `char *cp; int *ip; cp++, ip++` - what is the result.
56. compare the no. of bytes in unix and Dos for long char short int.
57. how to make programs portable on unix and Dos under such circumstances.
58. in c++, what is a constructor, destructor, friend etc.
59. what is waterfall model, prototype model etc.
60. what is testing. what is unit testing, integration testing etc.
61. What is indexing in databases?
62. What is atomicity?
63. Can recursive pgms be written in C++, Write a recursive pgm to calculate factorial in C++.
64. What is best data structure to store the processes info in a real time operating system?