



**Part-A**

**I. Answer all the questions. Each question carries 1 mark.**

1×10=10M

1. Expand SMPS
2. Write the truth table for OR gate
3. Give the formula to calculate the memory address of an array element in 1D array.
4. Which access specifier is implicitly used in a class?
5. Define free store?
6. Define Data Warehouse
7. What are cookies?
8. Define router in the network.
9. Expand IPR.
10. Define Webpage.

**Part-B**

**II. Answer any 5 questions. Each question carries 2 marks.**

2×5=10M

11. Explain SOP and POS with an example.
12. Simplify  $\bar{X}\bar{Y}Z + \bar{X}YZ + X\bar{Y}$ .
13. What is the significance of classes in OOP?
14. Define copy constructor. Write the syntax for declaring a copy constructor.
15. Mention the operations performed on a binary file.
16. Explain the different database users.
17. List the components of SQL architecture.
18. Write a note on twisted pair cable.

**Part-C**

**III. Answer any 5 questions. Each question carries 3 marks.**

3×5=15M

19. Explain different types of RAM.
20. Realize AND, OR, NOT gates using NAND gate.
21. Write a note on Polish notation.
22. Write the differences between static and dynamic memory allocation.
23. Differentiate text file and binary file.
24. Explain any 3 CODD'S rules.
25. Give the services of e-commerce.
26. Explain any 3 text formatting tags in HTML.

**Part-D**

**IV. Answer any 7 questions. Each question carries 5 marks.**

7×5=35M

27. Reduce the following expression using K-map  
 $F(A,B,C,D) = \pi(0,2,4,6,8,10,14)$
28. Apply Binary search technique for the following sequence of numbers to search the position of the element 35.  
10, 20, 30,35,40,45,50,55,60
29. Explain the operations performed on stack.
30. Explain the advantages and disadvantages of OOP.
31. Explain how objects of a class can be defined.
32. Explain the characteristics of function overloading.

33. Explain constructor overloading with programming example.
34. Write a note on working of constructors and destructors in derived class.
35. Explain Random File Organization.
36. Explain DML commands with example.
37. Explain any 5 network devices.

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