



PART - A

I. Answer all the questions. Each question carries ONE mark.

1 x 10 =10

1. Where is L1 cache located?
2. What is meant by universal gate?
3. What is a binary tree?
4. What are data members?
5. What is '&' and '*' symbol represents?
6. What do you mean by data redundancy?
7. What is repeater?
8. What is meant by hacker?
9. What is WWW?
10. What is web hosting?

PART - B

II. Answer any FIVE questions. Each Question carries TWO marks.

5 x 2 = 10

11. Define minterm and maxterm.
12. Prove algebraically

$$x + \bar{x}y = x + y$$

13. Mention the applications of OOPS.
14. Give an example to show the use of parameterized constructor with explicit call.
15. Differentiate between
 - a. tellg() and tellp()
 - b. get() and put()
16. Give the application areas of database.
17. List the data types in SQL
18. Explain different types of networking techniques.

PART - C

III. Answer any FIVE questions. Each Question carries THREE marks.

5x 3 = 15

19. Explain the types of bus.
20. Write the truth table and logical symbol of NAND gate.
21. Explain the memory representation of 1D array.
22. Give the advantages of a pointer.
23. Mention the different methods of opening a file.
24. Explain Database Architecture.
25. Write a note on open source.
26. Explain tag with example.

PART - D

IV. Answer any SEVEN questions. Each question carries FIVE marks.

7 x 5 = 35

27. Using K-map reduce the function where $f(A,B,C,D)=\pi(0,1,3,5,6,7,10,14,15)$.
28. Write an algorithm to delete an element from an array.
29. Using algorithm convert the following expression from infix to postfix using stack. $A*(\bar{A}+C*D)+E$
30. Differentiate Procedure oriented programming and object oriented programming.
31. Explain the use of an array of objects with an example.
32. Explain friend function and their properties.

33. Explain the use of '=' operator in constructor with example.
34. What is single inheritance? Explain with C++ program.
35. Explain database model.
36. Explain different functions of SQL.
37. Explain OSI model



PART - A

I. Answer all the questions. Each question carries ONE mark.

1 x 10 =10

1. List the types of UPS.
2. What is a logic gate?
3. What are the basic operations with queues?
4. Is it possible to access data outside the class?
5. How to initialize a pointer?
6. What is a record?
7. What is a bridge?
8. What is cyber law?
9. What is Gopher?
10. What do you mean by domain?

PART - B

II. Answer any FIVE questions. Each Question carries TWO marks.

5 x 2 =10

11. Write any *four* Boolean theorems.
12. Write the SOP expression for the following
ABCD=0010 ABCD=0110 ABCD=1110
13. Mention the advantages and disadvantages of OOP's.
14. What is destructor and list the properties of destructor.
15. Give the difference between text file and binary file.
16. What is a relationship? Classify its types.
17. Explain the features of SQL
18. Explain communication modes with example.

PART - C

III. Answer any FIVE questions. Each Question carries THREE marks.

5 x 3 = 15

19. Write a note on cache memory.
20. Write the truth table and logical symbol for XOR and XNOR gate .
21. What is linked list? Explain the types of linked list.
22. Explain call by address with example.
23. What is a file? Explain its types.
24. Explain data abstraction.
25. Name the different protocols used.
26. Give the difference between HTML and XML

PART - D

IV. Answer any SEVEN questions. Each question carries FIVE marks.

7 x 5 = 35

27. State and prove any *five* Boolean theorems
28. Write an algorithm to sort an array using insertion sort.
29. Write an algorithm to create linked list.
30. Explain the characteristics of OOP's
31. a. Write a note on access specifiers

b. Write a note on visibility mode

32. Explain the need of function overloading.
33. Explain copy constructor with example.
34. Explain the advantages and disadvantages of inheritance.
35. Explain *set* operations in relational algebra.
36. Explain DDL and DML commands with example.
37. Write a note on wireless/mobile computing technology.