



Part-A

I Answer the following questions. Each carries 1 mark

1 X 10 = 10

1. Where is L1 cache located?
2. What is the output of the two input OR gate for the inputs A=0, B=0?
3. What is a binary tree?
4. What is the significance of scope resolution operator?
5. Mention any one advantage of pointers?
6. What is data mining?
7. What is a gateway?
8. Expand ARPANET.
9. What is freeware?
10. What is DHTML?

Part-B

II. Answer any 5 questions. Each carries 2 mark

2 X 5 = 10

11. State and prove absorption law.
12. What is the complement of $\overline{A} B \overline{C} + \overline{A} \overline{B} C$?
13. Explain polymorphism.
14. Write syntax and example for default constructor.
15. Write the purpose of seekp() and seekg().
16. Mention the datatypes used in DBMS.
17. Explain UPDATE command.
18. Write any 2 differences between LAN and WAN.

Part-C

III. Answer any 5 questions. Each carries 3 mark

3 X 5 =15

19. Explain I/O Ports.
20. Realize the basic gates using NOR gate.
21. Write an algorithm to perform POP operation.
22. Explain pass by reference with an example.
23. Explain different file streams supported in C++.
24. Explain hierarchical database model.
25. Explain open source software.
26. Write the uses of PHP.

Part-D

IV. Answer any 7 questions. Each carries 5 mark

5 X 7 = 35

27. Given the Boolean function $F(A,B,C,D)=\pi(0,1,3,5,6,7,10,14,15)$. Reduce it using K-Map.
28. Explain operations performed on queue.
29. Write an algorithm to sort n numbers using insertion sort.
30. Write the differences between OOP and POP.
 - a) Explain array of objects.
 - b) Write any two characteristics of member functions outside a class.
31. Explain friend function using a programming example.
32. Explain copy constructor with a programming example.

33. Define:
 - a) Base class.
 - b) Derived class.
 - c) Inheritance.
 - d) Virtual Base class.
 - e) Abstract class.
34. Explain the features of DBMS.
35. Explain logical operators in SQL.
36. Explain the different communication modes.
