Duration: 3 Hrs 15 mins   **Max.Marks**: 70

Part-A

I.   **Answer all the questions.**   **10×1=10**

1. Expand DDRRAM.

2. What is meant by universal Gates?

3. Define data structures.

4. What are the two types of members referenced in a class?

5. Which is the implicit pointer to an object of a class?

6. What is data mining?

7. Define WAN.

8. Who are hackers?

9. What is Telnet?

10. What is XML?

Part-B

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

   5×2=10

11. Prove **xy + x = x** using truth table

12. Define Tautology and fallacy.

13. Briefly discuss the classes in OOP's.

14. Explain any two methods of invoking a parameterized constructor.

15. What is the use of eof( ) and tellp( ) with respect to files .

16. What is data Independence? Mention its types.

17. How do you modify the column name and width for existing table?

18. Explain any two types of communication modes or transmission modes.

Part-C

III.   **Answer any 5 questions. Each carries 3marks.**   **5×3=15**

19. Explain the different types of input output ports.

20. Explain any three derived gates.

21. Define the following with respect to binary tree

      1.Root   2. Depth   3. Degree

22. Explain the following

      1. Free store

      2. Pointer operator

      3. Addressof operator

23. Explain the different methods of opening a file in C++.

24. Explain ISAM.

25. Define the following

    1. OSS   2. FLOSS   3. WIPO

26. What are the uses of PHP files?

Part-D

IV.   **Answer any 7 questions. Each carries 5 marks.**   **7×5=35**

27. Given the Boolean function reduce it using k map.

    $F(A,B,C,D)=\pi(0,4,8,9,10,11,12,13,15)$

28. What is Queue? Explain the different types of queue.

29. Write an algorithm to delete an element from an array from the given position.

30. Write the differences between procedural programming and object oriented programming.

31. Explain array of objects in detail.

32. Write a program to find area of square, rectangle, triangle using function overloading.

33. Explain default constructor with Syntax and example.

34. What is virtual base class? Give an example.

35. What is data warehouse? Explain its components.

36. Write a note on DDL commands in SQL.

37. What is network topology? Explain in detail.