Jain College, Jayanagar
II PUC Mock Paper - I
Subject: Computer Science

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

Part-A

I. Answer all the questions. Each question carries one marks. **10×1=10**

1. Define data bus.
2. What is a logic gate?
3. What is LIFO list?
4. Give an example for defining a member function outside the class definition.
5. What is the purpose of **delete** operator in CPP?
6. Define normalization.
7. Expand UTP.
8. What is cyber law?
9. Define freeware.
10. What is DHTML?

Part-B

II Answer any 5 questions. Each carries 2 marks. **5×2=10**

11. Prove algebraically that **$(x + y)(x + z) = x + xz$.**
12. What would be the complement of **$x + \bar{x}\, y$.**
13. Define data abstraction and encapsulation.
14. When is copy constructor used in a program?
15. Differentiate **seekg()** and **seekp()** functions with respect to files**.**
16. Define data and information.
17. Give the syntax for **alter** and **update** command in SQL.
18. Mention any 2 antivirus software.

Part-C

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

19. Explain the characteristics of motherboard.
20. Draw the circuit diagram for the expression

    $Y=(\overline{x + y}) + \bar{x}\, y$.
21. Explain the memory representation of a stack using 1D array.
22. Explain the concept of calling a function by passing the address.
23. Explain any 3 member functions that belong to ifstream class.
24. Mention the DBMS users.
25. Write a note on open source software.
26. Name the different protocols used in networks.

Part-D

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

27. Given the Boolean function. Reduce it by using K-map.

    f(P,Q,R,S)=∑(5,6,7,8,9,10,14)

28. Explain any five basic operations performed on arrays.
29. Write an algorithm to delete a data element from the queue.
30. Write the real time applications of object oriented programming.
31. Describe access specifiers in a class.
32. Explain overloaded functions with syntax and example.
33. Write a program to find the sum of series **$1 + x + x^2 +- - - - - - x^n$** using constructors**.**
34. Write the advantages of inheritance.
35. Explain any 5 types of relational keys in RDBMS.
36. Briefly explain **SELECT** command in SQL.
37. Give the measures for preventing virus.

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