II PUC Mock Paper I – JAN 2020
Subject: Computer Science (41)

Duration: 3hr15 minutes **Max.Marks**: **70**

Part-A

I. **Answer all the Questions.** 10×1=10M

1. Expand ISA.
2. Which basic gate is also called as inverter?
3. Mention any one advantage of binary search method.
4. What is the significance of scope resolution operator in C++.
5. Write the declaration syntax for a pointer.
6. Define tuple.
7. Define the term topology of computer network.
8. Write any one application of computer network.
9. Define E-Commerce.
10. What is the use of HTML?

Part-B

II. **Answer any five questions. Each question carries two marks.** **5 × 2 = 10M**

11. Prove (x+y)(x+z)=x+yz using algebraic method.
12. Define midterm and maxterm.
13. Mention disadvantages of OOP.
14. Explain different ways of calling a parametrized constructor.
15. Write the difference between text file and binary file.
16. What is DBMS? Give an example of DBMS software.
17. Give the syntax and example for delete command in SQL.
18. Briefly explain circuit switching technique.

Part-C

III. **Answer any five questions. Each question carries three marks.** **5 × 3 = 15M**

19. What is a port? Explain serial port.
20. Explain the working of two input NAND gate with logic symbol and truth table.
21. Write an algorithm to pop an element from stack.
22. Write the advantages of pointer.
23. Explain the different methods of opening a files in c++.

24. Explain 1-tier database architecture.
25. Write a note on OSS.
26. Explain any 3 text formatting tags in HTML.

Part-D

IV. Answer any seven questions. Each question carries five marks. 7 × 5 = 35M

27. Reduce the following POS expression using k-map $f(P,Q,R,S) = \pi(0,2,4,6,8,10,12,14)$.
28. Write an algorithm to arrange the elements in ascending order using insertion sort technique.
29. Mention the applications of queues.
30. Explain any five basic concepts of OOP.
31. Explain the member function definition inside and outside the class definition in c++.
32. Explain function overloading in c++.
33. Explain parameterized constructor with a programming example.
34. What is inheritance? Explain different types of inheritance.
35. Briefly explain the data processing cycle.
36. What is DDL? Give the functions of DDL.
37. Explain any five network devices in detail.

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