



JAIN COLLEGE, J C Road Bangalore
Mock Paper -1, January - 2016
II PUC- Computer Science (41)

Time: 3 Hours 15 Minutes

Max. Marks: 70

PART - A

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

1 × 10 = 10

1. Expand DDRAM.
2. Draw the logic diagram of XNOR gate.
3. Name the data structure which is called LIFO.
4. Give the syntax for creating an object.
5. Mention any one advantage of pointer.
6. What is data abstraction?
7. Define baud rate.
8. What is a firewall?
9. What is gopher?
10. Define web hosting?

PART - B

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

5 × 2 = 10

11. State Boolean postulates for AND.
12. Simplify the Boolean expression: $C + \overline{BC}$
13. Explain any two applications of OOPS concept.
14. Write any two characteristics of destructor.
15. Differentiate *read()* and *write()* functions in file.
16. Explain *select* and *project* operations in relational algebra.
17. Give the syntax and example for delete commands in SQL.
18. Explain ring topology.

PART - C

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

5 × 3 = 15

19. Write a note on Expansion slots.
20. Explain realization of all the basic gates using NAND.
21. Write a note on linked list.
22. Explain *new* and *delete* operators.
23. Write a note on *fstream* classes.
24. What are the advantages of database system?
25. Explain the following terms.
a) FLOSS b) Freeware c) W3C
26. Explain XML.

PART - D

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

7 × 5 = 35

27. Using K-map reduce the function where $f(A,B,C,D) = \sum(0,2,6,8,10,12,14)$.
28. Write a note on various operations possible on non-primitive data structures.
29. Write an algorithm to perform enqueue - dequeue operations on queue.
30. Explain various concepts of OOPS.
31. Write a note on array of objects with example.
32. Explain function overloading concepts with programming example.
33. What is a constructor? Explain default constructor with example.
34. Write a note on Virtual Base Class.
35. What is a data model? Explain three different types of data models.
36. Explain different types of SQL commands with example.
37. Explain different types of viruses.



JAIN COLLEGE, J C Road Bangalore
Mock Paper -2, January - 2016
II PUC- Computer Science (41)

Time: 3 Hours 15 Minutes

Max. Marks: 70

PART - A

- I. Answer all the questions. Each question carries ONE mark. 1 × 10 = 10**
1. What is use of SMPS?
 2. What is the output of two input NAND gate for the input A=0, B=1?
 3. What is a Queue?
 4. What is a member function?
 5. What is dynamic memory allocation?
 6. What is a tuple?
 7. Expand GSM.
 8. What is the use of network protocol?
 9. What is telnet?
 10. What is meant by COLSPAN?

PART - B

- II. Answer any FIVE questions. Each Question carries TWO marks. 5 × 2 = 10**
11. State and prove associative law of multiplication.
 12. What is canonical form of boolean expression? Mention the types of canonical expressions.
 13. Explain data abstraction in OOPs .
 14. Mention the features of constructors.
 15. Explain **seek()** and **tell()** functions in file.
 16. Differentiate generalization and specialization.
 17. Classify various operators in SQL.
 18. Explain any two transmission modes.

PART - C

- III. Answer any FIVE questions. Each Question carries THREE marks. 5 × 3 = 15**
19. Explain cache memory.
 20. Draw the logic circuit diagram for the following expression.
 $F = A B + \overline{B} C + C A$
 21. Define data structures. Write a note on classification of data structures.
 22. How dynamic memory allocation is different from static memory allocation.
 23. Mention the types of files. Explain any one.
 24. Explain the features of network model.
 25. Explain domain name in networking.
 26. Give the difference between XML and HTML.

PART - D

- IV. Answer any SEVEN questions. Each question carries FIVE marks. 7 × 5 = 35**
27. Using K-map reduce the function where $F(W,X,Y,Z) = \prod(5,6,7,8,9,12,13,14,15)$.
 28. Explain the process of sorting using the technique of insertion sort with an example.
 29. Write an algorithm to search an element in an array using binary search.
 30. Explain various advantages of OOPs.
 31. How are objects passed to a function? Explain with an example.
 32. Explain all the restrictions of function overloading in detail.
 33. What do you mean by parameterized constructor? Explain with example.
 34. Explain different types of inheritance with example.
 35. Explain normalization in detail.
 36. Explain INSERT INTO command with example.
 37. Explain different switching techniques.