



**JAIN COLLEGE, J C Road Bangalore**  
**Mock Paper -1, January- 2020**  
**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 ISA slot.
2. Write the standard symbol for OR gate.
3. What is a binary tree?
4. What are data members?
5. float a; p=&a; what is the size of variable p?
6. What you mean y data redundancy?
7. What is repeater?
8. What is transmitter?
9. What is remote login?
10. What is XML?

**PART - B**

**II. Answer all the questions. Each Question carries TWO marks. 5 × 2 =10**

11. Construct a truth table for *three* variable ABC that will have output 1 when ABC=100, ABC=101, ABC=110, ABC=111. Write the expression in SOP form.
12. Give any four Boolean postulates.
13. Explain data abstraction with respect to OOP's
14. List the types of constructors.
15. Differentiate between  
a. tellg () and tellp () b. get() and put()
16. Give the application areas of database.
17. Differentiate *char* and *varchar* data type in SQL
18. List the goals of networking.

**PART - C**

**III. Answer all the questions. Each Question carries THREE marks. 5 × 3 =15**

19. Explain the types of bus.  
a.  $0+\bar{x}=1$  b.  $\bar{A}+1+0=0$
20. Give the dual form of
21. Explain polish notation and its types.
22. Explain call by reference with example.
23. Explain the types of files.
24. Write the advantages & disadvantages of data warehousing.
25. List the services used in E-commerce.
26. Write a short note on XML.

**PART - D**

**IV. Answer all the questions. Each question carries FIVE marks. 7 × 5=35**

27. State and prove De-morgans theorem algebraically.
28. Write an algorithm for Binary search.
29. Write an algorithm for inserting and deleting an element from the queue.

30. Differentiate Procedure oriented programming and object oriented programming.
31. Explain access specifiers with example.
32. What is function overloading? Explain with example.
33. Explain the use of '=' operator in constructor with example.
34. How does inheritance influence the working of constructors and destructors.
35.
  - a. Explain database model.
  - b. Explain the stages of data mining.
36. Explain different functions of SQL.
37.
  - a. Explain OSI model
  - b. Explain network security in detail

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**JAIN COLLEGE, J C Road Bangalore**  
**Mock Paper -2, January- 2020**  
**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 BIOS.
2. What is a truth table?
3. Give any two examples for non-linear data structure.
4. Mention the operator used to access members of a class.
5. What is dynamic memory?
6. Name any one database users.
7. What is bandwidth?
8. What is a bridge?
9. What is freeware?
10. What is web scripting?

**PART - B**

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

11. Define minterm & maxterm.
12. Write the logical symbol & truth table for AND gate.
13. What is dynamic binding & message passing?
14. What is destructor and list the properties of destructor.
15. What is a file? Explain any two types of files.
16. What is a relationship? Classify its types.
17. Explain any two logical operators of SQL
18. Explain communication modes with example.

**PART - C**

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

19. Give the configuration of a computer.
20. Simplify the expression using De-morgans theorem  
a.  $xy+xy$       b.  $x(y+z)$
21. What is linked list? Explain the types of linked list.
22. Differentiate static memory & dynamic memory.
23. Explain read () and write () in data file handling.
24. Explain Normalization and its types.
25. Name the different protocols used.
26. What is DHTML? Give the features of DHTML.

**PART - D**

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

27. Given  $F(A,B,C,D)=\pi(0,2,4,6,8,10,14)$  reduce by using K-maps
28. Write an algorithm to push and pop an element from the stack.
29. Define *a*. root node *b*. height of a node *c*. internal node *d*. leaf node *e*. depth of a tree.
30. Write the applications of OOP's
31. How are objects passed as arguments to a function? Give an example.

32. Write a program to find cube of a number using inline function.
33. What is a constructor? Write the characteristics of constructor.
34. Explain the advantages and disadvantages of inheritance.
35. Explain data abstraction in DBMS
36. Explain DDL and DML commands with example.
37. a. What is transmission/communication mode? Explain its types.  
b. Write the measures to prevent virus.

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