



**SRI BHAGAWAN MAHAVEER JAIN  
COLLEGE**

Vishweshwarapuram, Bangalore.

**II PUC MOCK PAPER - 1 (FEB-2023)**

**Course:** II PUC

**Subject:** Computer Science

**Max. Marks:** 70

**Duration:** 3:00 Hrs 15 Mins

### Section A

**Answer all questions. Each question carries one mark.**

**I. Select the correct answer from the choices given:**

*(Repeated answers will not be considered)*

1. System bus connects
  - (a) Minor computer components
  - (b) Major computer components
  - (c) I/O ports
  - (d) External devices to the rest of the computer.
2. Minterm is
  - (a) Sum of all literals
  - (b) canonical SOP form
  - (c) product of all literals
  - (d) canonical POS form
3. Binary tree is a data structure in which each parent node has
  - (a) child nodes whose values are less than the parent node
  - (b) child nodes whose values are more than the parent node
  - (c) several child nodes
  - (d) at most 2 child nodes
4. Scope resolution operator is used to
  - (a) define functions inside the class
  - (b) declare functions outside the class
  - (c) define functions outside the class
  - (d) declare functions inside the class
5. New operator is used to perform
  - (a) object construction
  - (b) static memory allocation
  - (c) object destruction
  - (d) dynamic memory allocation
6. Constraints are used to
  - (a) modify a table
  - (b) specify rules for the data in a table
  - (c) Delete a record from the table
  - (d) set access rights for the user.
7. FTP stands for
  - (a) File transfer process
  - (b) First to post
  - (c) File transfer point
  - (d) File transfer protocol
8. Attribute refers to
  - (a) Tuples
  - (b) records
  - (c) columns
  - (d) rows
9. ----- is concerned with buying and selling info, products and services over computer networks
  - (a) Commerce
  - (b) E-business
  - (c) E-commerce
  - (d) None of the above
10. A web browser can access the webpage from a web server by
  - (a) request
  - (b) response
  - (c) interrupts
  - (d) normal messages
11. Which of the following are the basic logic gates?
  - (a) AND
  - (b) OR
  - (c) NOT
  - (d) all of the above
12. Function overloading is
  - (a) one function containing another function inside it
  - (b) very long functions
  - (c) functions with same signature
  - (d) Functions with the same name but differ in the number of parameters or type.

13. Constructors are used to  
(a) destroy an object  
(b) call private functions  
(c) modify data whenever required  
(d) initialize the data members of an object when it is created.
14. The no of types of inheritance are  
(a) 4 (b) 3 (c) 5 (d) 2
15. get() member function is used to  
(a) read a whole line of text (b) read a single character  
(c) write a single character (d) read binary data from a file

**II Fill in the blanks choosing the appropriate word/words from those given in brackets.**

*(Repeated answers will not be considered)*

**(Oracle, redundancy, entity, tuples, Data mining)**

16. Records are also known as -----
17. One of the main features of Database system is to control data -----
18. ----- is an example for DBMS
19. ----- is a real world object
20. -----is used to analyze and pick out relevant information.

**Section B**

**Answer any FOUR questions. Each question carries TWO marks**

**4 × 2 = 8**

21. State and prove involution law .
22. what is tautology and fallacy
23. Define the terms class and object .
24. Write any 2 disadvantages of the default constructor.
25. What are the 2 types of files ?
26. State the differences between data and information.
27. Write the syntax and example of drop command in SQL
28. Explain the goals of networking?

**Section C**

**Answer any FOUR questions. Each question carries THREE marks**

**4 × 3 = 12**

29. Explain the types of motherboard.
30. Explain the working of NOR gate with truth table and circuit diagram .
31. Write an algorithm to delete an element from an array at a given position.
32. Define the following a. freestore b. this pointer c. Memory leak
33. Write advantages of binary file .
34. What is sequential file organization? Explain.
35. Explain the services of E-commerce.
36. Explain the features of XML.

**Section D-(marks)****Answer any SIX questions. Each question carries FIVE marks.****6 × 5 = 30**

37. Given the Boolean function  $f(a,b,c,d) = \sum (0,4,8,9,10,11,12,13,15)$  using k-map.
38. Write an algorithm to search an element in an array using binary search .
39. Write an algorithm to perform PUSH and POP operations on stack.
40. Explain the characteristics of OOPs.
41. Describe the access specifiers in a class.
42. Explain inline functions with syntax and example.
43. Explain parametrized constructor with syntax and example .
44. Explain single level inheritance with a suitable programming example .
45. Define primary key, composite key , candidate key , foreign key , alternate key .
46. Explain the logical operators used in SQL.
47. What is Topology? Explain the types of Topology.

\* \* \*