

**(English Version)**

- Instructions :**
1. The question paper has four parts namely A, B, C, D.
 2. For Part-A questions, only the first written answers will be considered for evaluation.

PART – A

Answer **all** the questions, each question carries 1 mark.

(20 × 1 = 20)

- I. Select the correct answer from the choices given.
- 1) The large Printed Circuit Board (PCB) having many chips, ports and controllers mounted on it.
 - a) Processor
 - b) Motherboard
 - c) Slots
 - d) Power unit
 - 2) According to which law, the complement of a variable is complemented again, we get the same variable?
 - a) Complementarity law
 - b) Absorption law
 - c) Involution law
 - d) Idempotence law
 - 3) The two input XNOR gate produces the output as high (1) when its inputs are
 - a) 0, 0
 - b) 1, 1
 - c) 0, 1
 - d) Both a) and b)
 - 4) Assertion (A) : Tree is a linear data structure.
Reason (R) : The data items in tree data structure represent hierarchical relationship.
 - a) A is true, R is false
 - b) A is false, R is false
 - c) A is false, R is true
 - d) A is true, R is true



5) Given the class

```
class student
{
    int regno ;
    char name[25] ;
public :
    int marks ;
    void get( ) ;
};
```

Identify the data members of the class student.

- a) regno, name, marks b) regno, name
 - c) marks d) regno, name, marks, get()
- 6) A non-member function that has full access right to the private and protected members of the class.
- a) Inline function b) Friend function
 - c) Overloaded function d) Both b) and c)
- 7) The return type of destructor is
- a) int b) void
 - c) no return type d) both a) and b)
- 8) The class whose properties are inherited by another class is
- a) Base class b) Derived class
 - c) Virtual class d) Abstract class
- 9) Given : int *ptr, n = 25 ; which is the correct way to initialize the pointer?
- a) ptr = *n ; b) ptr = &n ;
 - c) ptr = n ; d) n = ptr ;



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

(Data independence, Data integrity, Sequential, Foreign, Datawarehouse, Serial)

- 16) _____ refers to the validity of data.
- 17) The ability of the database to modify a schema definition at one level without affecting next higher level is _____.
- 18) In _____ file organisation records are arranged one after another determined by the key field.
- 19) _____ key can be used to cross-reference tables.
- 20) _____ is a repository of organisations electronically stored data.

PART – B

III. Answer **any four** questions. Each question carries **2** marks. **(4 × 2 = 8)**

21) Write the dual form of :

a) $1 + 0 = 1$

b) $X \cdot 1 = X$

22) Realize OR gate using only NAND gate.

23) Write any two features of parameterized constructor.



- 24) List the member functions of "ofstream".
- 25) Define data model. Mention any one data model.
- 26) Mention any two logical operators in SQL.
- 27) What is "order by" clause in SQL? Write its syntax.

PART – C

IV. Answer **any four** questions. Each question carries **3** marks. (4 × 3 = 12)

- 28) Write a note on UPS and its types.
- 29) Explain the different types of linked list.
- 30) Define :
 - a) Free store
 - b) this pointer
 - c) Self referential structure.
- 31) What is a file? Compare text file and binary file.
- 32) Describe the different levels of RDBMS.