



(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) <code>ptr = *n ;</code> | b) <code>ptr = &n ;</code> |
| c) <code>ptr = n ;</code> | d) <code>n = ptr ;</code> |



- 10) The set of values for an attribute in that column.
- a) Tuple
 - b) Fields
 - c) Domain
 - d) Entity
- 11) The SQL command used to delete the entire table.
- a) Delete
 - b) Drop
 - c) Remove
 - d) Desc
- 12) Correct expansion of HTTP.
- a) Hyper Text Transfer Protocol
 - b) High Text Transfer Protocol
 - c) Hyper Test Transmission Protocol
 - d) High Text Transmit Protocol
- 13) The device that connects dissimilar networks.
- a) Hub
 - b) Switch
 - c) Router
 - d) Gateway
- 14) A non-profit organisation created for the purpose of supporting free software movement.
- a) FSF
 - b) GNU
 - c) OSS
 - d) FLOSS
- 15) The type of web hosting which rents the entire web server from the hosting company.
- a) Co-location hosting
 - b) Dedicated hosting
 - c) Free hosting
 - d) Virtual hosting



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.