XIIKDAR21

5034-B

COMPUTER SCIENCE

Time : 3 Hours]

[Maximum Marks : 70

Section-1

1. (i) Explain the concept of scope resolution operator with the help of a C++ program.

   or

   Define object-oriented language. Explain its various elements.   4

   (ii) Define Class. Explain Data Members and Member Functions of a Class.   3

   (iii) Define Object Explain Array of objects.   3

   (iv) Explain the significance of Access specifier.   2

   (v) Define Polymorphism.   1

(vi) C++ is a object-oriented programming language.

(True/False) 1

(vii) How many access specifiers are there in C++ ?

(A) 04

(B) 01

(C) 03

(D) 02 1

Section–2

2. (i) Define Constructor. Explain Default Constructor. 3

(ii) Destructor can not be inherited. (True/False) 1

(iii) .... is called when an object goes out of scope.

(A) Class

(B) Destructor

(C) Main Function

(D) Constructor 1

Section–3

3. (i) Define Inheritance. Explain multilevel inheritance and multiple inheritance. 3

    (ii) Define private visibility mode. 1

    (iii) Inheritance supports Data Hiding. (True/False) 1

Section–4

4. (i). Define Pointer. Explain its declaration. 3

    (ii) Define Delete Operator. 1

    (iii) Memory allocated during compilation of a program is called ....

       (A) New Allocation

       (B) Variable Allocation

       (C) Static Allocation

       (D) Dynamic Allocation 1

Section–5

(i) Define an Array. Explain transversal operation in Array.

Or

What do you mean by Sorting ? Explain Bubble sort with the help of example.   4

(ii) Define Stack Explain its *two* operations.   3

(iii) What is a Queue ? Give its *two* advantages.   2

(iv) FIFO is used in ....

  (A) Queue

  (B) Linked List

  (C) Stack

  (D) Array   1

Section–6

(i) Explain Data Definition Language and Data Manipulation Language in SQL.

Or

Explain Database and write its advantages.

4

(ii) Define the following terms

(a) Domain

(b) Primary key

(c) Tuple

(iii) Write *three* Parts of SQL.

(iv) Which of the following SOL command is used to add a column to an existing table ?

(A) Select

(B) Update

(C) Create

(D) Alter

Section–7

7. (i) State and prove De-Morgan's laws by using Truth-Table.

(6)

Or

Explain NAND and NOR gate with Truth-Table and logic circuits.   4

(ii) State and explain Principle of Duality   3

(iii) Define AND and OR operators.   2

(iv) Truth-Table is used to express :

    (A) Boolean Subtraction

    (B) Boolean Division

    (C) Boolean Expression

    (D) Boolean Addition   1

Section–8

i) Define Topology. Explain Bus and Ring Topologies in detail.

Or

Write a note on Transmission Media.   4

(ii) What do you mean by Network ? Explain Local Area Network.   3

(iii) What is Cyber Security ?   2

(iv) Network failure is Primarily a .... issue.

   (A) Performance

   (B) Security

   (C) Reliability

   (D) None of these   1