XIIARJKUT23

9116–Y

COMPUTER SCIENCE

Time : 3 Hours]   [Maximum Marks : 70

SECTION–1

1. (i) How is member function defined inside a class ? Explain with

    an example.

    Or

    How is a class defined in C++ ? Explain member functions of

    a class.   4

    (ii) How is Polymorphism achieved at run time ?   3

    (iii) Write features of object oriented programming.   3

(iv) What is an object ? 2

(v) Wrapping up of data and functions togethers is known as

.... (Fill in the blank) 1

(vi) Public member is not accessible outside the class. (True/False) 1

(vii) How many objects can be in the same class ?

(A) 02

(B) 04

(C) 03

(D) As much as possible 1

SECTION–2

2. (i) Define Default Constructor. How to write it ? Explain with example. 3

(ii) A Destructor is used to destroy the objects. (True/False) 1

(iii) Like constructor, there can be more than one destructor in a class. (True/False) 1

SECTION-3

3. (i) What are different types of Inheritance supported by C++ ? Explain any such one.   3

   (ii) Define derived class.   1

   (iii) Which symbol is used to create multiple inheritance ?

      (A) Colon (:)

      (B) Comma (,)

      (C) Dot (.)

      (D) None of these   1

SECTION-4

4. (i) Explain declaration and initialization of pointers.   3

   (ii) What is stored in pointer variable ?

      (A) An integer

      (B) Floating point value

      (C) A memory address

      (D) Any C++ value   1

   (iii) This pointer points to another class.   (True/False)   1

SECTION-5

5. (i) Differentiate between Linear search and Binary Search.

Or

Write a C++ program to push an element into a stack.   4

(4)

(ii) What is an Array ? Explain 1D array.   3

(iii) Define Enqueue and Dequeue.   2

(iv) Define Array Index.   1

SECTION-6

6. (i) What is SQL ? Explain *three* parts of SQL.

Or

What is Database ? Explain relational data model.   4

(ii) Define the following SQL functions :

(a) SUM()

(b) MAX()   3

(iii) Define CREATE command with syntax. 2

(iv) .... is defined as a set of values of the same type.

    (A) Tuple

    (B) Relation

    (C) Attribute

    (D) Domain 1

SECTION–7

7. (i) State and explain principle of duality. Why is it important in Boolean algebra ?

Or

Explain functioning of AND gate with circuit diagram and Truth-Table. 4

(ii) State and prove Distributive Law by Truth-Table.   3

(iii) Draw Truth-Table of OR operator.   2

(iv) Which of the following is Universal Gate ?

    (A) AND

    (B) OR

    (C) NAND

    (D) NOT   1

SECTION–8

8. (i) Describe coaxial cable with its advantages and disadvantages.

Or

What is Cyber Security ? Why is cyber security important ?

Explain.   4

(ii) Define Networking and write its advantages.　3

(iii) Write a brief note on Star Topology.　2

(iv) Which of the following is not a Computer Network ?

    (A) TAN

    (B) PAN

    (C) LAN

    (D) MAN　1