

B-16-Y

Roll No..

Total No. of Questions : 8].

[Total No. of Printed Pages : 7

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

XIIARJKUT23-9116-Y

Turn Over

B-16-Y

- (iv) What is an object ? 2
- (v) Wrapping up of data and functions together 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

(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