

**D-9**

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Total No. of Questions : 8]

[Total No. of Printed Pages : 4

**12<sup>th</sup>ARJKLK23**

**9609**

**COMPUTER SCIENCE**

Time : 3 Hours]

[Maximum Marks : 70

**SECTION-1**

1. (i) Define Class. Explain class declaration with example.

*Or*

Explain Function Overloading. Write its advantages.

4

(ii) Explain Access Specifiers.

3

(iii) Explain Polymorphism.

3

(iv) What is Scope Resolution Operator ?

2

(v) A collection of similar objects is called .....

(Fill in the blank)

1

(vi) Objects are real world entities.

(True/False)

1

(vii) Which of the following is not a component of OOP ?

(A) Operator

(B) Data Hiding

(C) Data Abstraction

(D) Inheritance

1

Turn Over

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**SECTION-2**

2. (i) Explain constructor with its advantages. 3
- (ii) Destructor cannot be overloaded. (True/False) 1
- (iii) Destructor is used to ..... objects. (Fill in the blank) 1

**SECTION-3**

3. (i) What is Inheritance ? Explain single-level inheritance with example. 3
- (ii) Explain Base Class. 1
- (iii) What is Visibility Mode ? 1

**SECTION-4**

4. (i) Explain Pointer with Declaration and Initialization. 3
- (ii) Name the operator used to allocate memory in C++. 1
- (iii) Define Dynamic Memory Allocation. 1

**SECTION-5**

5. (i) Define STACK. Explain two operations performed on STACK

*Or*

Write a C++ program to implement Linear Search.

- (ii) What is Queue ? Explain Enqueue and Dequeue
- (iii) Explain I-D Array.
- (iv) Which of the following is not a type of Data Structure ?
  - (A) Array
  - (B) Queue
  - (C) Pointer
  - (D) STACK

**SECTION-6**

6. (i) Define Database. Explain relational data model.

*Or*

Define and explain SQL with advantages.

- (ii) Define Attribute, Tuple and Alternate Key.
- (iii) Explain COUNT( ) and AVG( ) functions of SQL.
- (iv) Which of the following SQL Command is used to change or modify the data in a table ?
  - (A) ALTER
  - (B) CREATE
  - (C) UPDATE
  - (D) SELECT

**SECTION-7**

7. (i) Explain Boolean Operator with truth table.

*Or*

State and prove Cumulative Law and Associative Law.

( 4 )

- (ii) Define Logic Gate. Explain OR Gate and AND Gate. 3
- (iii) State principle of Duality. 2
- (iv) Which of the following is a Universal Gate ?
- (A) AND (B) NOT
- (C) OR (D) NAND 1

**SECTION-8**

8. (i) What is Transmission Media ? Explain Optical Fiber in detail.

*Or*

What is Cyber-bullying ? Explain how Cyber-bullying can be prevented ? 4

- (ii) Explain Bus Topology with advantages. 3
- (iii) Write short note on PAN. 2
- (iv) Define MODEM. 1

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