

A-1298

Total Pages : 3

Roll No.

MCS-502/MIT(CS)-303

OOPS USING C++ M.Sc. Cyber Security

Examination February, 2026

Time : 2:00 Hrs.

Max. Marks : 70

Note :- This paper is of Seventy (70) marks divided into Two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given therein. *Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.*

Section-A

Long Answer Type Questions (2×19=38)

Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.

A-1298

(1)

P.T.O.

1. (a) Discuss the advantages and functions of OOPS.
(b) What is meant by function prototyping ? Explain the importance of call by value.
2. (a) Differentiate between user defined data types and derived data types.
(b) What is a friend function ? What are the merits and demerits of using a friend function ?
3. (a) What is a constructor ? Write the syntax of declaring the constructor ?
(b) Write a C++ program to swap two numbers using pointer.
4. (a) State the use of scope resolution operator and its use in C++.
(b) What is a virtual base class ? Why is it important to make a class virtual ?
5. (a) Differentiate between hierarchical inheritance and hybrid inheritance with an example.
(b) Draw hierarchy of stream classes for file operations.

Section–B

Short Answer Type Questions (4×8=32)

Note :- Section ‘B’ contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. What are the basic concepts of OOS ? Explain.
2. What is a Copy Constructor ? Give an example for a Copy Constructor.
3. Explain in detail about virtual function and polymorphism with an example.
4. Explain the concept of overriding. How it differs from overloading.
5. Explain with suitable example. Write a syntax of for loop in C++.
6. Differentiate between do..while and while loops on the basis of syntax.
7. What is static data member ? What are the important characteristics of the static member variable ?
8. Differentiate between static data member and static member functions.
