4/7/2025

AB-235548

M.Sc. (Semester-II) Examination, June-2025

(Backlog)

COMPUTER SCIENCE

(Object Oriented Programming Concepts in C++)

Time Allowed : Three Hours

Maximum Marks : 70

Note : This question paper is divided into four sections. All sections are **compulsory**. Attempt questions as per instructions given in each section. Distribution of marks is given in each section.

SECTION-A

(Objective Type Questions)

Note : Attempt **any ten** questions. Each question carries **1** mark.   [10×1=10]

1. (i) Variables declared outside a block are called ____.

(ii) _____ constructor is used to declare and initialise an object from another object of same class in C++.

(iii) The access specifier is usually used for data members of a class is _____.

(iv) _____ Header File is required for file handling in C++.

(v) _____ keyword is used to handle the exception.

(vi) The virtual function mainly used to achieve _____.

(vii) Consider the following conditional statements if (m == 20 – 10|| n > 10). The order of execution of the following operations is :

A. ==

B. –

C. ||

D. >

Choose the correct answer from the options given below :

(a) D,B, A, C

(b) B, D, C, A

(c) B, D, A, C

(d) A, B, D, C

(viii) What is an object in C++?

(a) It is a function of class

(b) It is an instance of the class

(c) It is the data type of class

(d) It is part of the syntax of class

(ix) Virtual function should be :

(a) Public

(b) Private

(c) Protected

(d) Default

(x)   How do you check if the end of a file has been reached in C++?

    (a)   file.end_of_file.()

    (b)   end of File (file)

    (c)   file.eof()

    (d)   eof(file)

(xi)   Using which of the following keywords can an exception be generated?

    (a)   threw

    (b)   throws

    (c)   throw

    (d)   catch

(xii)   Consider the following statements :

int x = 10, y = 15 ;

x = ((x = y)? (y + x) : (y – x)) ;

What will be the value of x after executing these statements?

    (a)   5

    (b)   25

    (c)   15

    (d)   30

SECTION-B

(Very Short Answer Type Questions)

Note : Attempt **any five** questions. Each question carries **02** marks. (Word limit : **25-30** words)   [5×2=10]

2.   (i)   What is Variable? Define variable declaration and initialization.

    (ii)   What is Tokens?

    (iii)   What are the uses of friend class?

    (iv)   What is this Pointer?

    (v)   What is the advantage of Inheritance?

    (vi)   What is file pointer?

    (vii)   What is the benefit of namespace?

SECTION-C

(Short Answer Type Questions)

Note : Attempt **any five** questions. Each question carries **04** marks. (Word limit : **250** words)   [5×4=20]

3. (i) Describe data types in C++.

(ii) Describe function with passing object as a parameter with example.

(iii) Describe the constructor overloading.

(iv) Describe file and stream classes.

(v) Describe the exception handling mechanism.

(vi) Define try, catch and thorws keyword with example.

(vii) Write a program for virtual class and function.

SECTION-D

(Long Answer Type Questions)

Note : Attempt **any three** questions. Each question carries **10** marks. (Word limit : **500** words)   [3x10=30]

4. (i) (a) What is Array? Explain the types of array.

(b) What is Pointer? Explain pointer to pointer with example.

(ii) What is Constructor and Destructor? Explain the types of constructor.

(iii) What is Polymorphism? Explain the types of polymorphism.

(iv) (a) Explain Opening and Closing file in file handling.

(b) Explain string I/O, char I/O and object I/O.

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