

END TERM EXAMINATION**THIRD SEMESTER [BCA] DECEMBER 2024-JANUARY 2025****Paper Code: BCA-205****Subject: Object Oriented Programming
with C++****(BATCH 2021 ONWARDS)****Time: 3 Hours****Maximum Marks: 60****Note: Attempt five questions in all including Q. No.1 which is compulsory. Select one question from each unit.****Q1 Write short notes on the following (Any Five):-****(4x5=20)**

- ☒ (a) C++ Stream classes
- ☒ (b) Explain inline function
- ☒ (c) What is virtual function?
- ☒ (d) Differentiate between Call by value and call by reference.
- ☒ (e) Explain Aggregation.
- ☒ (f) What is Abstract Class?
- ☒ (g) Differentiate between early binding and late binding.
- ☒ (h) Give an example of Template function.

UNIT-I

- Q2** (a) Differentiate between Procedural programming and Object oriented programming. **(5)**
 (b) Explain the use of new and delete operators using an example. **(5)**

OR

- Q3** (a) What are the features of Object-oriented Programming? **(5)**
 (b) Differentiate between C and C++. **(5)**

UNIT-II

- Q4** (a) What is the friend function? Write a C++ program to illustrate the use of the friend function. **(5)**
 (b) What is a constructor? Explain various types of constructors. Write a C++ program to illustrate the use of the default constructor, parametric constructor, and copy constructor. **(5)**

OR

- Q5** (a) Define operators overloading. Write a C++ program to overload '+' operators to concatenate two string and two complex numbers. **(5)**
 (b) Explain the Access Specifiers in C++ and also give the suitable example. **(5)**

UNIT-III

- Q6** (a) What are the different forms of inheritance supported by C++? Explain with examples. **(5)**
 (b) Explain the different forms of polymorphism in C++ with the help of example. **(5)**

OR

- Q7** (a) What is the Unary Operator Overloading? Write a C++ program to implement it. **(6.5)**
 (b) What is Pure Virtual function? Explain with suitable example. **(6)**

UNIT-IV

- Q8** (a) Explain the difference between exception and error. Write a program containing a possible exception. Use a try block to throw it and a catch block to handle it properly. **(5)**
 (b) What are command line arguments in a file? Write a program to explain how to read text and to display its contents on the screen. **(5)**

OR

- Q9** (a) What is a template? Write a template for adding two numbers of different data types. **(5)**
 (b) What is generic programming? How it is implemented in C++? **(5)**
