

**1290**

**B. C. A. (Third Semester)  
EXAMINATION, 2023-24  
OBJECT ORIENTED PROGRAMMING  
USING C++**

**Course Code : BCA301T**

*Time : Three Hours*

*Maximum Marks : 75*

**Note :** (i) All questions are compulsory.

(ii) Answer each part of the first question in not more than **100** words and the remaining questions in **800** words.

(iii) Marks are mentioned against the questions.

1. Answer each of the following questions : 15

(a) List the advantages of object oriented programming.

- (b) What are the features of `iostream.h` file ?
- (c) What is the difference between “is-a” and “has-a” relationship ?
- (d) What is polymorphism ?
- (e) List ways to open a file.

2. Answer the following question : 15

(a) What is object-oriented programming ? How is it different from procedure-oriented programming ? What are the unique advantages of an object-oriented programming ?

*Or*

(b) What are various control and conditional statements available in C++ ? Explain the use of break and continue statements.

3. Answer the following question : 15

(a) Explain with the help of a single program the concepts of objects as parameters, friend functions, constructor overloading and destructors.

[ 3 ]

1290

*Or*

(b) What do you mean by constructor and destructor ? Write a OOPs program in C++ to demonstrate copy constructor and destructor.

4. Answer the following question : 15

(a) Design three class **student**, **exam** and **result**, where **result** is inherited from **exam** and **exam** is inherited from **student**. Write possible constructors to initialize the value. Write a main function to test the constructor execution by creating objects.

*Or*

(b) What is the difference between operator overloading and operator overriding ? Write a C++ code to show how overriding is achieved.

5. Answer the following question : 15

(a) How to define and declare a function ? What is the function prototype ? Write a program to find all the prime numbers between 1 to 100 using a function.

[ 4 ]

1290

*Or*

(b) Explain the following with examples :

(i) Multiple Inheritance

(ii) Exceptional Handling

(iii) Generic Classes

1290

P. T. O.