

## GUJARAT TECHNOLOGICAL UNIVERSITY

**BE - SEMESTER- IV (Old) EXAMINATION – WINTER 2019**

**Subject Code: 140705**
**Date: 17/12/2019**
**Subject Name: Object Oriented Programming with C++**
**Time: 10:30 AM TO 01:00 PM**
**Total Marks: 70**
**Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- |            |     |   |           |
|------------|-----|---|-----------|
| <b>Q.1</b> | (a) | Difference between object oriented programming and procedure oriented programming in Detail.            | <b>07</b> |
|            | (b) | Describe, with examples, the uses of enumeration data types.  | <b>07</b> |
| <b>Q.2</b> | (a) | Explain type conversion from basic type to class type and class type to basic type with example.        | <b>07</b> |
|            | (b) | What do you mean by function overloading? Explain it with example.                                      | <b>07</b> |
| <b>OR</b>  |     |   |           |
|            | (b) | Explain the inline function and default arguments with example.   | <b>07</b> |
| <b>Q.3</b> | (a) | Describe various operators in C++.  | <b>07</b> |
|            | (b) | Explain static data member and static member function with suitable example                             | <b>07</b> |
| <b>OR</b>  |     |   |           |
| <b>Q.3</b> | (a) | What is default constructor? What is the purpose of parameterized constructor? Explain it with example. | <b>07</b> |
|            | (b) | What is an operator function? Write a program to overload binary + operator as a member function.       | <b>07</b> |
| <b>Q.4</b> | (a) | Write a C++ program for bubble sort using template functions.   | <b>07</b> |
|            | (b) | Discuss friend function and friend class in detail.   | <b>07</b> |
| <b>OR</b>  |     |   |           |
| <b>Q.4</b> | (a) | Write a program which uses command line arguments to display the contents of a file.                    | <b>07</b> |
|            | (b) | What is Inheritance? Explain different types of Inheritance.  | <b>07</b> |
| <b>Q.5</b> | (a) | Explain pointer to objects in C++. Write a program to demonstrate use of this pointer.                  | <b>07</b> |
|            | (b) | Explain Virtual function and Pure Virtual Function with example.  | <b>07</b> |
| <b>OR</b>  |     |   |           |
| <b>Q.5</b> | (a) | Explain STL with its core components.   | <b>07</b> |
|            | (b) | What is a stream? Describe various stream classes for console I/O operations.                           | <b>07</b> |

\*\*\*\*\*