

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER- IV.OLD• EXAMINATION – WINTER 2017

Subject Code: 140704

Date: 29/11/2017

Subject Name: Object Oriented Concepts and Programming

Time: 02.30 PM TO 05.00 PM

Total Marks: 70

Instructions:

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

- Q.1** (a) Explain the differences between OOP and POP. **07**
(b) Describe the following terms in C++ with example: **07**
i) Default Argument ii) this pointer iii) Dynamic Binding
- Q.2** (a) What is friend function? Write a program to find out sum of two private data members **a** and **b** of two classes **X** and **Y** using a common friend function. Assume that the prototype for both the classes will be void sum (X, Y) **07**
(b) Define with examples: **07**
a) Object b) Macro c) Binary file d) Portability
- OR**
- (b) i) Explain function overloading with an example. **07**
ii) Explain scope resolution operator (::) with an example.
- Q.3** (a) What is an operator function? Write a program to overload binary + operator as a member function. **07**
(b) Explain various forms of inheritance with suitable diagrammatic illustrations. **07**
- OR**
- Q.3** (a) Demonstrate the use of static variables and static functions with a program. **07**
(b) i) Explain virtual base class with a program. **07**
ii) Explain **ios::app** and **ios::ate** flags.
- Q.4** (a) i) Explain merits and demerits of inline functions. **07**
ii) Explain >> and << operators. **07**
(b) What is a constructor? Explain types of constructor with examples. **07**
- OR**
- Q.4** (a) What is a stream? Describe various stream classes for console I/O operations. **07**
(b) Explain type conversion from class type to basic type and one class type to another class type with suitable example. **07**
- Q.5** (a) Write a program that reads a text file and creates another text file that is identical except that every letter must be converted to lower case irrespective of its original case (e.g 'a' or 'A' will become 'a'). **07**
(b) i) Explain **tellg** and **seekp** functions. **07**
ii) Explain STL with its core components.
- OR**
- Q.5** (a) What is an Exception? Explain Exception Handling Mechanism. Give example with multiple catch blocks. **07**
(b) What is the purpose of using template in C++? Explain template function and template class with example. **07**
