

**B.Tech. – VIEP – COMPUTER SCIENCE AND
ENGINEERING (BTCSVI)****Term-End Examination****December, 2015****BICS-003 : OBJECT ORIENTED PROGRAMMING***Time : 3 hours**Maximum Marks : 70*

Note : Attempt any seven questions. All questions carry equal marks.

1. (a) Compare and contrast OOP language and Procedural language. 5
- (b) Explain the use of private and public keywords. How are they different from each other ? 5
2. Explain the following terms with the help of an example for each : $4 \times 2 \frac{1}{2} = 10$
- (a) Encapsulation
- (b) Reusability
- (c) Robustness
- (d) Delete operator

3. (a) What do you understand by object identity ? Explain with the help of an example. 5
- (b) What is friend function ? Explain with the help of an example. 5
4. (a) Describe the various types of Inheritance with the help of an example. 5
- (b) Write a program in C++ to generate Fibonacci series using recursion with member function. 5
5. Define the following : $4 \times 2 \frac{1}{2} = 10$
- (a) Copy constructor
- (b) Abstract data types
- (c) Default constructor
- (d) Static class data
6. Write a program in C++ to declare classes X, Y and Z. Each class contains one character array as a data member. Apply multiple inheritance. Concatenate string of class X and Y and store it in the class Z. The program prints all the three things. 10
7. (a) What is polymorphism ? Explain the compiler time and run time binding. 5
- (b) What is the difference between virtual function and virtual classes ? 5

8. (a) What is a file ? What are the different types of file opening modes ? 5
- (b) Differentiate between the sequential and random file operations. 5
9. (a) What do you mean by Exception Handling ? How many different types of errors are encountered in a program ? 5
- (b) Write a program to declare pointer to member variable and display the content of the variable. 5
10. Write short notes on any *two* of the following : $2 \times 5 = 10$
- (a) Constructor and Destructor
- (b) Templates
- (c) Dynamic Memory Allocation
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