B.Tech. – VIEP – COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

June, 2017

00504

BICS-003 : OBJECT ORIENTED PROGRAMMING

Time : 3 hours   *Maximum Marks : 70*

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

1. (a) Explain each of the following terms with the help of an example :   5
    (i) Abstraction
    (ii) Encapsulation
    (iii) Inheritance

    (b) Write a C++ program to swap the values of two variables without using the third variable.   5

2. (a) What is polymorphism ? Explain the various types of polymorphism with the help of example.   5

    (b) What is a virtual function ? Write a C++ program to explain the operations of virtual function.   5

3. Explain the concept of stream class. How are stream classes classified ? Discuss stream manipulators.   10

4. What is dynamic memory allocation ? Write a C++ program to explain the concept of dynamic memory allocation. *10*

5. (a) Write a C++ program to explain the concept of exception handling, using try, throw and catch. *5*

   (b) Explain the following with an example of each : *5*

   (i) Constructor

   (ii) Destructor

6. (a) Explain operator overloading with the help of a suitable program. *5*

   (b) What is Inheritance ? Write the syntax and give an example program. *5*

7. (a) What is a friend function ? Explain with the help of a suitable program. *5*

   (b) What is an inline function ? Explain with the help of suitable program. *5*

8. (a) What are the various characteristics of object oriented language ? *5*

   (b) Explain the various features of object oriented programming. *5*