

**B.Tech. - VIEP - COMPUTER SCIENCE AND
ENGINEERING (BTCSVI)**

00026

Term-End Examination

June, 2015

BICS-003 : OBJECT ORIENTED PROGRAMMING

Time : 3 hours

Maximum Marks : 70

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

1. (a) What is an object and a class ? Explain the key concept of OOPs. 5
- (b) How are data and function organized in an object-oriented program ? 5

2. Distinguish between the following :
 - (a) Data abstraction and Data encapsulation 5
 - (b) Dynamic binding and Message passing 5

3. (a) What is object oriented modelling ? Explain with the-help of an example. 6
- (b) How are the static variables initialized ? Explain with the statement. 4

4. (a) What are constructors and destructors ?
Explain the characteristics of constructors
and destructors. 5
- (b) Write a program to declare a class with
private data member. Accept data through
constructor and display the data with
destructor. 5
5. (a) What do you mean by inheritance ?
Describe the various types of inheritance
with the help of an example. 5
- (b) Write a program to define three classes
A, B and C, each class contains private
data member, derive class C from A and B
by applying multiple inheritance, read and
display the data using constructors. 5
6. (a) What is the difference between operator
overloading and function overloading ? 5
- (b) Write a program to overload '+' binary
operator. 5
7. (a) Explain the use of virtual keyboard. What
is the difference between virtual function
and virtual classes ? 5
- (b) Define abstract classes. How can they be
used for debugging a program ? 5

8. (a) What is a stream ? Explain sequential and random file operations. 5
- (b) Write a program to open a file in output and input mode. Accept data and write to the file and display the contents of the file. 5
9. (a) What do you mean by exception handling ? Describe the role of keywords try, catch and throw. 5
- (b) What is dynamic initialization ? Is it possible in 'C' ? 5
10. Write short notes on any *two* of the following : $2 \times 5 = 10$
- (a) Garbage Collection
- (b) Class Template
- (c) Stack Unwinding
- (d) Stream Manipulators
-