

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

00396

Term-End Examination

December, 2014

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 object-oriented programming ?
How is it different from the
procedure-oriented programming ? 5
- (b) Write a program in C++ to convert
temperature in Fahrenheit into its
equivalent Celsius. 5
2. (a) What is meant by information hiding ?
Why is it required ? 5
- (b) Explain inheritance with an example of
C++ program. 5
3. (a) Illustrate the hierarchy of data type in
C++. 5
- (b) What is a class ? Explain the private and
public functions of a class with an
example. 5

4. Create a class employee which has name, age and address of employee. Include functions `getdata()` and `showdata()`. `getdata()` takes the input from the user and `showdata` displays the data of all employees in the following format : 10

Name :

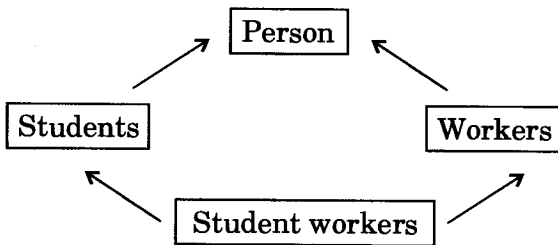
Age :

Address :

5. (a) What does inheritance mean in C++ ? What are the different forms of inheritance ? Give an example for each. 5

- (b) What is a virtual function ? Explain with an example. 5

6. Implement the following class hierarchy where class Person contains name and age of person and Student class contains Enrolment No. of the students and the Worker class contains social security numbers of workers. 10



7. (a) Describe the various classes available for file operators. 5

- (b) Explain constructors and destructors with example. 5

8. (a) What is the difference between opening a file with constructor function and opening a file with open() function ? 5
- (b) Write a program that works with multiple files. 5
9. (a) Distinguish between the terms class template and template class. 5
- (b) What is an exception ? What are the advantages of using exception handling mechanism in a program ? 5
10. Discuss briefly about any *two* of the following : 5+5=10
- (a) New and delete operator
- (b) Polymorphism
- (c) Friend function
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