

00244

**B.Tech. IN COMPUTER SCIENCE AND
ENGINEERING (BTCSVI)**

Term-End Examination

June, 2011

BICS-003 : OBJECT ORIENTED PROGRAMMING

Time : 2 hours

Maximum Marks : 70

Note : Attempt any five questions. Question No.1 is Compulsory.

1. (a) A class consist of 1
- (i) private and public member
 - (ii) objects
 - (iii) operators
 - (iv) none of the above
- (b) The scope resolution operator is 1
- (i) : (ii) ::
 - (iii) ?: (iv) size of ()
- (c) C ++ is 1
- (i) an object oriented language
 - (ii) a procedural language
 - (iii) a structured language
 - (iv) none of the above

- (d) Which is an example of polymorphism ? 1
- (i) function overloading
 - (ii) operator overloading
 - (iii) virtual function
 - (iv) all the above
- (e) If m and n are int type variables, what will be the result of the expression $m\%n$ when $m=5$ and $n=2$? 1
- (i) 0
 - (ii) 1
 - (iii) 2
 - (iv) none of the above
- (f) Which of the following cannot be passed to a function ? 1
- (i) Reference variable
 - (ii) Arrays
 - (iii) Class objects
 - (iv) Header files
- (g) An exception may be thrown from 1
- (i) a throw statement in a catch block
 - (ii) a try block in a function
 - (iii) a function called in a try block
 - (iv) a return statement in a function
- State whether *True* or *False*
- (h) The break statement is used to exit from all the nested loops. 1
- (i) In a class, members are private by default. 1
- (j) A derived class cannot directly access the private members of its base class. 1
- (k) An exception is always caused by a syntax error. 1

- (l) two functions cannot have the same name in ANSI C++. 1
- (m) The meaning of operator is changed in operator overloading. 1
- (n) All arithmetic operators have same precedence. 1
2. (a) What is object - oriented programming ? How is it different from the procedure oriented programming ? 6
- (b) Distinguish between the following terms - 8
- (i) objects and classes
- (ii) Inheritance and polymorphism
3. (a) Write a program to add two complex numbers. Use constructors and operator overloading. 8
- (b) What do you mean by default constructor, parameterized constructor and copy constructor ? 6
4. (a) What is operator overloading ? Why is it necessary to overload an operator ? 7
- (b) A friend function cannot be used to overload the assignment (=) operator. Explain why ? 7

5. (a) What are the different forms of inheritance ? Give an example for each. 7
- (b) When do we make a class virtual ? Explain with example. 7
6. (a) What is a virtual function ? Why do we need virtual functions ? 6
- (b) Create a base class called shape. Derive two specific classes called triangle and rectangle from the base class shape. Write a program to find area of triangle and rectangle. 8
7. (a) Write a program to copy the content of one file to another. 7
- (b) Write a program that illustrates the application of multiple catch statements. 7
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