

# 2002 SCHEME

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CS36

## Third Semester B.E. Degree Examination, December 2011 OOP with C++

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions.**

- 1 a. List and explain characteristics of object-oriented programming concept. (05 Marks)  
b. Write short notes on the following :  
i) Construct qualifier      ii) References  
iii) Typedef names          iv) Enumeration types. (10 Marks)  
c. Explain the concept of type conversion, with suitable examples. (05 Marks)
- 2 a. When it is suitable to define a function as inline? What are the benefits of inline function? Explain the working of inline function, with a suitable programming example. (10 Marks)  
b. What is function overloading? List and explain the three steps involved in overload resolution, with an example. (10 Marks)
- 3 a. Explain how the command line options are handled, with an example. (05 Marks)  
b. What are advantages of generic functions? Apply the generic function to bubble sort. (08 Marks)  
c. Explain the argument-type conversions in overloaded functions, with an example. (07 Marks)
- 4 a. What are the features of constructors and destructors? Write a C++ program that shows the example of a parameterized constructor. Also explain the execution of constructors and destructors. (10 Marks)  
b. Write short notes on the following, with example :  
i) This pointer      ii) Nested classes. (10 Marks)
- 5 a. What are the restrictions for overloading the operators? Explain how the operator overloading is done in member function format and by using friend function, with an example. (10 Marks)  
b. Explain the overloading of -- (decrement) operator both in prefix and postfix form, with a suitable programming example. (10 Marks)
- 6 a. Explain the static data members and static member functions. What are the restrictions placed on static member functions. Give the examples for static data members and static member functions. (10 Marks)  
b. Write a C++ programming example that illustrates the use of a base class pointer to access the derived objects. Mention which are all the member that a base class pointer can access. (10 Marks)
- 7 a. What are the ambiguities that arise when multiple base classes are inherited, explain with an example. Also mention the remedies for the same. (10 Marks)  
b. Explain the protected base class inheritance with a program. (10 Marks)
- 8 a. Explain the nature of virtual function, with an example. (10 Marks)  
b. Explain the overloading of input (>>) and output (<<) operator, with an example. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.