

(Following Paper ID and Roll No. to be filled in your Answer Books)

PAPER ID : MH19

Roll No.

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M. TECH. (Sem.II)

THEORY EXAMINATION 2015-16

OBJECT ORIENTED PROGRAMMING

Time : 3 Hours

Total Marks : 100

Note : (i) Attempt questions from each Section as per directions.

(ii) Be very precise in your answers.

1. Attempt any Four questions: (5×4=20)
- (a) Write the applications and Limitation of object oriented programming.
 - (b) State the characteristics of procedural Languages?
 - (c) What is the difference between Public and Private Protection?
 - (d) Define copy constructor with suitable example.
 - (e) With respect to C++ distinguish 'Object' from 'Classes'.
 - (f) Write the difference between Interface and Abstract class.

2. Attempt any Two questions: (10×2=20)
- (a) What is the significance of operator overloading? Write a C++ program to add two complex objects by overloading the '+' operator.
 - (b) Illustrate with an example program, the order in which constructors & Destructors are called for global, local automatic and local static objects created inside main and sub functions.
 - (c) Create a class that contains one data member. Overload all the four arithmetic operators so that they operate on the object of that class.
3. Attempt any Two questions: (10×2=20)
- (a) Bring out the relationship between Base Classes & Derived Classes and also explain the working of constructors & Destructors in derived classes.
 - (b) What is template function? Design and implement a template version function Min () and Max () for finding the minimum and maximum values of given set of elements of list T, represent by a seqList <T> object.

(c) What is the purpose of the STL (Standard Template Library)? Write a program to illustrate class template with multiple parameters.

4. Attempt any Two questions: (10×2=20)
- (a) Write a short note on the utility of virtual function and friend function in C++ with suitable example. Also highlight the difference between pure virtual functions and virtual function.
 - (b) How virtual functions are declared in C++? What is the difference between default and parameterized constructors?
 - (c) Give a detailed description of the concepts of exception handling with specific reference to the concepts of rethrowing an exception, exception specification etc.
5. Write short note on any Four of following: (5×4=20)
- (a) Friend functions.
 - (b) Polymorphism in C++.
 - (c) Inheritance.
 - (d) Abstract class.
 - (e) Function overloading in C++.
 - (f) Meta classes.
