

IV B.Tech I Semester Supplementary Examinations, April/May 2005
OBJECT ORIENTED PROGRAMMING AND C++
(Metallurgy & Material Technology)

Time: 3 hours

Max Marks: 70

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Explain the trends in object oriented software design?
(b) Distinguish between the following terms:
 - i. Inheritance and polymorphism.
 - ii. Dynamic binding and message passing.
2. (a) What is a friend function? What are the merits and demerits of using friend functions?
(b) Distinguish between a 'struct' and a 'class' in C++?
(c) What are 'new' and 'delete'?
3. (a) What is a copy constructor? Explain its significance?
(b) How does a class accomplish data hiding? Explain with an example.
4. (a) What is a virtual function? What are the implications of making a function a pure virtual function?
(b) What are the different forms of inheritance? Give an example for each.
5. (a) Write overloaded functions.
 - i. to convert an ascii string to an int and
 - ii. to convert an ascii string to a float
(b) List out reasons why using 'new' is a better idea than using 'malloc ()'?
6. Write a C++ program that reads a file containing a list of numbers and writes two files, one with all numbers divisible by 3 and another containing all the other numbers.
7. (a) State what will happen in the following situations:
 - i. Several handlers match the type of exception thrown.
 - ii. A 'catch' handler throws an exception
 - iii. A function throws an exception of type not specified in the specification list.
(b) Describe briefly the features of I/O system supported by C++?
8. (a) Write a function template for finding the minimum value contained in an array?
(b) Describe the various approaches to detect the end-of-file successfully.
