B.E. 4th Semester (IT) Examination, May-2010

OBJECT ORIENTED PROGRAMMING
USING C++

Paper–IT-202-E

Time allowed : 3 hours]   [Maximum marks : 100

Note : Attempt any **five** questions. All questions carry equal marks.

1. (a) Differentiate between procedural languages and object oriented languages.   5

    (b) Differentiate between a class and an object.   5

    (c) Can inline functions can be recursive, if yes, why and if not then why not.   5

    (d) How can we declare local and global variables ?   5

2. (a) What is the use of scope resolution operator ? 5

    (b) What are namespaces ? What problems does the name space feature solve ?   5

(c) What is this pointer ? What are the advantages of using this magical pointer ? Explain each of the advantage with the suitable pseudo code.   10

3. What does it mean to declare a...

- member function as virtual ?

- member function as static ?

- member variable as static ?

- member object as static ?

- member function as static ?

- destructor as static ?   20

4. (a) What is inheritance ? What are the access privileges in C++ ? What is the default access level ?   10

(b) What is multiple inheritance ? What are its advantages and disadvantages ?   5

(c) Can you think of a situation where your program would crash without reaching the breakpoint which you set at the beginning of main () ? 5

5. Differentiate between function templates and template functions. Write a generic program for the stack that takes as input int data and float data. 20

6. (a) What is a file ? Write a program to create, read and write in a sequential access file. 10

   (b) Write a program to print your program code as output. 10

7. What is polymorphism ? What are the various types of polymorphism ? Write the appropriate programs to explain the various types of polymorphism. 20

8. Write notes on any *two* : 20

   • open and close principle

   • exception handling

   • virtual destructors