Total No. of sheet used   : 01   Total No. of Questions: 09
Subject   : Object Oriented Programming using C++
Class   : BCA 3rd Semester
Paper   : BCA-215
Title of Paper   : Object Oriented Programming using C++
Time Allowed   : 3 Hours
Maximum Marks: 75

Note: Candidates are required to attempt five questions in all selecting at least
       two questions each from sections A and B. Section C is compulsory.

SECTION A

Q1.   Explain the various characteristics of object oriented programming languages.   15
       Discuss in detail various advantages and disadvantages of object oriented
       programming languages.

Q2.   What is a pointer variable? What are the applications of pointer variable? What   15
       are its advantages and disadvantages? What operations can be performed on
       pointer variables? What are basic data and derived data types which can be
       expressed in pointer variables?

Q3.   Differentiate between an iterative function and a recursive function. Explain   15
       with examples. Which one will you prefer to use in which circumstances?

Q4.   Explain the concept of class in C++. What is its importance? How do you   15
       declare a class in C++? Explain with examples. Explain the concept of data
       members and member functions in a class?

SECTION B

Q5.   What is the purpose of friend functions and friend classes? Explain with the   15
       help of suitable examples.

Q6.   What is a default constructor? What is its significance? In what way it is   15
       equivalent to a constructor having default arguments? What are various types
       of default constructors? Explain with examples.

Q7.   What do you mean by operator overloading? Which operators cannot be   15
       overloaded? How can we overload unary and binary operators? Explain
       giving suitable examples.

Q8.   Write a program in C++ to demonstrate the difference between compile time   15
       and run time polymorphism.

SECTION C

Q9.   a)   What are conditional operators?   03
      b)   What is function overloading?   03
      c)   What is the use THIS pointer?   03
      d)   What are the merits and demerits of dynamic memory allocation?   03
      e)   What is a destructor? What is its significance?   03