PARUL UNIVERSITY
FACULTY OF IT & COMPUTER SCIENCE
BCA - IMCA Winter 2017 – 18 Examination

Semester: 3   Date: 28/12/2017
Subject Code: 05101203/ 05301203   Time: 02:00pm to 04:30pm
Subject Name: Object Oriented Concepts and Programming   Total Marks: 60

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Answer the followings.

A. Write short notes. (05)
   1. What is an object?
   2. What is the purpose of 'delete' operator?
   3. How does a C++ Structure differ from a C++ Class?
   4. Enlist Derived data types in C++.
   5. What does this pointer do?

B. Multiple choice type questions. (10)
   1. The wrapping up of data and functions into a single unit is called
      a) inheritance b)encapsulation c)data hiding d)polymorphism
   2. The process by which objects of one class acquire the properties of objects of another class is called
      a) abstraction b) inheritance c) encapsulation d)polymorphism
   3. The process of making an operator to exhibit different behaviours in different instances is called
      a)function overloading b)operator overloading c)inheritance d)none of these
   4. Objects communicate with one another by using
      a)message passing b)operator overloading c)inheritance d)both a & b
   5. The technique of Hiding internal details in an object is called
      a) encapsulation b)functions c)Abstraction d)inheritance
   6. Classes are -------- data type
      a)derived b)user-defined c)built-in d)both a & c
   7. By default, the members of a C++ class are
      a)Private b)Public c)Protected d)None of these
   8. How many objects can be created from an abstract class?
      a)Zero b)One c)Two d)As many as we want
   9. Constructor is executed when
      a)an object is created b)an object is used c)a class is declared d)an object goes out of scope
   10. When a function is defined inside a class, it is treated as
      a) Inline function b) Inside definition c) Inline definition d) Data function

Q.2 Answer the followings. (Attempt any 5) (15)
   1. Write any four features of OOPS.
   2. What is data abstraction?
   3. Explain various file mode parameters in C++.
   4. Write some properties of friend functions.
   5. Distinguish between Call by Value and Call by Reference.
   6. Write at least four rules for Operator overloading

Q.3 Answer the following. (Attempt Any 3) (15)

    1. What is Constructor? Explain constructor overloading with example.

    2. Explain Friend function with example.

    3. What is a stream? Describe various stream classes for console I/O operations in C++.

    4. Write a C++ program to check that the given integer number is prime or not.

Q.4 Answer the following.

  A. Explain pure virtual function with example. **(05)**

  B. List the various inheritance concepts? Explain any two concepts in detail with example. **(10)**

<div align="center">

OR

</div>

  B. What is the purpose of operator overloading? List the C++ operators which cannot be over-ridden. Write a function to overload any binary operator and show that how it can be used. **(10)**