END TERM EXAMINATION

THIRD SEMESTER [BCA] DECEMBER-2015

Paper Code: BCA 209	Subject: Object Oriented Programming Using C++
	(Batch: 2011 onwards)

Time : 3 Hours   **Maximum Marks :75**

Note: Attempt any five questions including Q.No. 1 which is compulsory. Internal choice is indicated.

Q1.   Attempt the following: **(2.5x10=25)**

   a)   Merits and Demerits of C++

   b)   What is an object? Explain with an example.

   c)   What is a class? Explain different access modifiers in a class

   d)   Abstract class

   e)   Container class

   f)   This pointer

   g)   Static data members and member functions

   h)   Encapsulation

   i)   Data hiding

   j)   Polymorphism

Q2.   a) Difference between object oriented programming and procedure programming and also explain the structure of C++.   **(4)**

   b) What is virtual function? Write rules for virtual function. Explain with example.   **(4)**

   Merits & Demerits of Friend Function.

   c) What is a friend function? ~~Write rules for virtual function~~. Explain with example.   **(4.5)**

OR

Q3.   a) What is inline member function? Why we declare a member function as inline. Explain with example.   **(4)**

   b) Explain function prototyping with example.   **(4)**

   c) Explain function overloading with example.   **(4.5)**

Q4.   a) What is Constructor? Explain various types of Constructor with example.   **(4)**

   b) Explain composition v/s classification hierarchies?   **(4)**

   c) Explain following with respect to C++ with examples: -   **(4.5)**
      i) new operator   ii) destructor

OR

                                                            P.T.O.

Q5. a) Give a programming example that overloads== operator with its use. **(4)**

b) Which operators cannot be overloaded? Write steps to overload + operator so that it can add two complex numbers. **(4)**

c) What does inheritance means in C++? What are different forms of inheritance? Give an example of each. **(4.5)**

Q6. a) What are the differences between pointers to constant and constant pointers? **(4)**

b) List and explain in brief various functions required for random access file operations. Illustrate with an example, how 'endl' and 'setw' manipulator works. **(4)**

c) What is the difference between opening a file with constructor and opening a file with open () function. **(4.5)**

OR

Q7. a) Explain with example how can a template class be created. **(4)**

b) Explain Generic function and Generic class. **(4)**

c) What is Exception handling? Explain types of exception handling and explain suitable examples. **(4.5)**

Q8. a) In what way destructor is different from a delete operator? Explain with example. **(4)**

b) Write a short note on type casting? Explain with example. **(4)**

c) Define Namespaces? Explain with example. **(4.5)**

OR

Q9. a) Briefly discuss different techniques of using polymorphism in C++. Explain. **(4)**

b) What are the functions available in C++ to manipulate the file pointers? Explain. https://www.ggsipuonline.com **(4)**

c) What are the different data types available in C++? Explain. **(4.5)**

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