



UTTARAKHAND OPEN UNIVERSITY, HALDWANI (NAINITAL)

**BCA-II 2<sup>nd</sup> YEAR 3<sup>rd</sup> SEMESTER ASSIGNMENT**

*Last Date of Submission: 15 Jan., 2015*

**Course Title: Object-Oriented Programming through C++**

**Course Code: BCA-08**

**Year: 2014-15 Summer**

**Maximum Marks: 40**

**Section 'A'**

**Section 'A' contains 08 short answer type questions of 5 marks each. Learners are required to answer 4 questions only. Answers of short answer-type questions must be restricted to 250 words approximately.**

1. What are abstract data types?
2. What is Encapsulation? Explain.
3. What are empty classes? Can instance of empty classes be created? Give reasons.
4. Define friend function.
5. Define Polymorphism. Explain the different types of polymorphism.
6. What is dynamic binding? What are the advantages of dynamic binding?
7. What is the difference between class and structure?
8. Can base class access a member of derived class? Give reasons.

**Section 'B'**

**Section 'B' contains 04 long answer-type questions of 10 marks each. Learners are required to answer 02 questions only.**

1. (i) What are the various elements of object oriented programming?  
(ii) Compare structured and object oriented programming.
2. What are the different forms of inheritance supported by C++? Explain with examples.
3. What is the need of virtual function? Describe this with the help of a suitable example using C++. What is pure virtual function?
4. What is operator overloading? List the operators that cannot be overloaded and justify why they cannot be overloaded.