

**NEW**

**2016**

**BCA**

**4th Semester Examination**

**OOPS USING C++**

**PAPER—2201**

*Full Marks : 100*

*Time : 3 Hours*

*The figures in the right-hand margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

*Illustrate the answers wherever necessary.*

*Answer Q. No. 1 and any four from the rest.*

1. Answer any *five* questions : 5×2

(a) What is the difference between Dynamic binding and message passing?

(b) What are objects? How are they created?

*(Turn Over)*

- (c) Define virtual base class.
- (d) What are the difference between reference variables and normal variables ?
- (e) Describe data hiding concepts.
- (f) What is multi-level inheritance ?
- (g) What is destructor ? Describe with an example.
2. (i) What is member function ? When do we declare a member of a class static ? 2+3
- (ii) When do we need to use default arguments in a function ? 5
- (iii) Describe with examples the uses of enumeration data types. 5
3. (a) What is Constructors ? Explain the different types of constructors in C++ with examples. 2+8
- (b) When are copy constructor called ? 5
4. (i) What is friend function ? What are the merits and demerits of using friend functions ? 2+4

- (ii) Write a C++ program to overloading binary operators using friends. 6
- (iii) Why operator overloading is necessary to overload an operator? 3
5. (i) Write the different forms of inheritance with an example for each. 8
- (ii) Write a C++ program of multilevel inheritance. 7
6. (i) What is exception? What are the advantages of using exception handling mechanism in a program? 2+3
- (ii) What is the difference between opening a file with a constructor function and opening a file with open() function? When one method is preferred over the other? 3+2
- (iii) Explain when do we make a virtual function 'Pure'. 5
7. Write short notes on the following (any three): 3×5
- (i) Inline function ;

- (ii) Command line arguments ;
- (iii) Manipulators ;
- (iv) Polymorphism ;
- (v) Static member functions.

**[ Internal Assessment — 30 ]**

---