

**NEW**

**2017**

**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 class and how it accomplish data hiding?

*(Turn Over)*

- (b) Define scope and life of a variable ?
  - (c) What are the properties of static member function ?
  - (d) Name the operators that cannot be overloaded ?
  - (e) What is an abstract class ?
  - (f) Differentiate between static and dynamic polymorphism.
  - (g) What are the applications of 'this' pointer.
2. (a) What is function overloading ? Write a C++ program to implement function overloading. 8
- (b) Describe different types of modifiers in C++ with example ? 7
3. (a) Explain the use of 'new' and 'delete' operator with suitable example. 5
- (b) What is the application of scope resolution operator :: in C++, explain with the help of suitable examples. 4

- (c) Write a C++ program to show dynamic memory allocation. Also explain the concept. 6
4. (a) What is constructor ? Describe the types of constructor each with example. 10
- (b) Explain the advantages and disadvantages of declaring member function inside and outside the class. 5
5. (a) Explain multiple and multi-level inheritance each with suitable example? 8
- (b) What is virtual function ? Give the rules for virtual functions ? 2+5
6. (a) Describe the various file open modes. 4
- (b) What is exception handling ? Discuss the need of exception with try, catch and throw keywords. 6+2
- (c) What is void pointer ? Give an example in C++. 3
7. Write short notes on the following (any three) : 3×5
- (a) Encapsulation

- (b) Inheritance
- (c) Pointer to a object
- (d) Polymorphism
- (v) Message passing.

**[ Internal Assessment — 30 ]**

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