

**BACHELOR OF COMPUTER APPLICATIONS
(BCA) (Pre-Revised)**

Term-End Examination

December, 2017

**CS-72 : C++ AND OBJECT ORIENTED
PROGRAMMING**

Time : 2 hours

Maximum Marks : 60

Note : *Question number 1 is compulsory. Attempt any three questions from the rest. All examples must be in C++ programming language only.*

1. (a) What is object oriented programming ?
Explain how it is better than structured programming. 5
- (b) Write a C++ program to find the area of the following shapes using function overloading : 5
 - (i) Rectangle
 - (ii) Circle
- (c) Create a Class Book containing data members
Title, Author_Name, Publisher and Price.
Write a constructor for this class. Also define a member function to display the book details. Use appropriate access specifiers in this process. 10

- (d) What is Dynamic Binding ? Explain with the help of an example. 5
- (e) What are Exceptions ? Explain how exceptions are handled in C++. 5
2. (a) Explain Data Hiding and Data Encapsulation with the help of an example. 5
- (b) What is Type Conversion ? Explain implicit type conversion with the help of an example. 5
3. (a) Write a C++ program to find the average marks of ten students in subject Mathematics and in subject English. 5
- (b) Write a C++ program to inherit a Class 'Car' and a Class 'Bus' from the Class 'Vehicle'. 5
4. (a) Explain logical operators in C++ with the help of examples. 5
- (b) Explain Class Diagram with the help of an example. 5
5. Explain the following with the help of examples : $4 \times 2 \frac{1}{2} = 10$
- (a) Use Case Diagram
- (b) Friend Function
- (c) Protected Access Specifier
- (d) Multiple Inheritance