

**BACHELOR OF COMPUTER
APPLICATIONS (BCA)**

Term-End Examination

December, 2020

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

Time : 2 Hours

Maximum Marks : 60

Note : (i) *Question No. 1 is compulsory.*

(ii) *Attempt any **three** questions from the rest.*

(iii) *All examples must be in C++ programming language.*

1. (a) Answer the following briefly (any *eight*) :24
 - (i) Differentiate between a class and a object.
 - (ii) Explain the various control structures in C++.
 - (iii) What do you mean by Header Files ?
 - (iv) What are the Function Prototypes ?

- (v) List advantages/disadvantages of friend functions.
 - (vi) What is Data Hiding in C++ ?
 - (vii) Explain the role of file iostream.h.
 - (viii) What are NEW and DELETE operators ?
 - (ix) How many ways are there to initialize an int with a constant ?
 - (x) Differentiate between macros and functions.
- (b) Explain Call by Value and Call by Reference with the help of examples. 6
2. (a) What is Operator Overloading ? List the operators which cannot be overloaded. Write a C++ program to overload the '+' operator. 6
- (b) List advantages of Object Oriented Programming. 4
3. (a) What is an Object ? Explain how many objects in C++ are created and destroyed, with the help of a program that creates Bank Account class, having data members as name, account number, balance and a member function that displays balance amount. 6

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- (b) Explain the use of continue statement in C++, with the help of an example. 4
4. Explain the following terms : 2 each
- (a) Copy constructor
 - (b) Pure Virtual Functions
 - (c) Polymorphism
 - (d) “this” pointer
 - (e) Reusability
5. (a) What do you understand by Exception Handling in C++ ? Write the syntax of try, throw and catch expressions. 5
- (b) Discuss any *two* diagrams in UML with the help of an example for each. 5