

**Second Semester Bachelor of Science (B. Sc.)
Examination**

COMPUTER SCIENCE

Paper – I

(Object Oriented Programming Using C++)

Time : Three Hours]

[Max. Marks : 50

- N.B. :**
- (1) All questions are compulsory and carry equal marks.
 - (2) Draw neat and labelled diagram wherever necessary.

EITHER

1. (a) How are data member and member function organized in an object oriented program ?
Explain with example. 5
- (b) List features of object oriented programming and explain any two. 5

OR

- (c) Explain any two access specifier used in C++. 5
- (d) What is Inline function? Explain with suitable example. 5



EITHER

2. (a) What is operator overloading ? Explain unary operator overloading giving suitable example. 5
- (b) Write a program to demonstrate usage of a constructor function in program. 5

OR

- (c) What is copy constructor ? Explain it with suitable example. 5
- (d) Write rules for operator overloading. 5

EITHER

3. (a) What is inheritance ? Explain hybrid Inheritance with example. 5
- (b) How "this pointer" is used in programming ? Explain with suitable example. 5

OR

- (c) What is multilevel inheritance? Write a program to demonstrate the implementation of multilevel inheritance. 5
- (d) How 'new' and 'delete' operators are used in C++ programming ? Explain with example. 5

EITHER

4. (a) What do you mean by virtual function ? List rules for creating virtual functions. 5

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- (b) Write a program to raise an exception if an attempt is made to 'divide by zero'. 5

OR

- (c) Explain exception handling. When is a catch (...) handler used ? 5
- (d) Write a program to demonstrate usage of pure virtual function with example. 5

5. Attempt any ten :—

- (a) How static data member is defined ?
- (b) What is object ?
- (c) Write syntax of class.
- (d) What is default constructor ?
- (e) What is binary operator overloading ?
- (f) Give use of destructor.
- (g) What is derived class ?
- (h) Write syntax to define array of object.
- (i) Give diagrammatic representation of single inheritance.
- (j) List any two user defined exception.
- (k) What is abstract class ?
- (l) What is fault tolerant design technique ?

1 × 10 = 10