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

(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 heritance.

(j) List any two user defined exception.

(k) What is abstract class ?

(l) What is fault tolerant design technique ?

$1 \times 10 = 10$