Bachelor of Science (B.Sc.) Semester—II Examination

COMPUTER SCIENCE (Object Oriented Programming Using C++)

Optional Paper—1

Time : Three Hours] [Maximum Marks : 50

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagram wherever necessary.

EITHER

1. (A) What are data members and member functions ? Explain how member functions can be defined outside the body of class. 5

(B) What are access specifiers ? Explain :

(i) Private

(ii) Public

(iii) Protected. 5

OR

(C) What is inline function ? Explain it with suitable example. 5

(D) What are the different rules for Operator Overloading ? 5

EITHER

2. (A) What are constructors and destructors ? Explain with suitable example copy constructor. 5

(B) Write the rules for operator overloading. Also list the operators which are not overloadable. 5

OR

(C) What is parameterised constructor ? Explain it with suitable example. 5

(D) Write a C++ program to overload Unary Operator '++'. 5

EITHER

3. (A) What is dynamic object ? Write a note on new and delete operation. 5

(B) What are array of objects ? Explain it with suitable example. 5

OR

(C) What is inheritance ? Explain multiple inheritance with suitable example. 5

(D) Explain 'This' pointer with suitable example. 5

EITHER

4. (A) What is an exception ? How are exceptions handled in C++ ? Write different rules for exception handling. 5

(B) What is virtual function ? Explain it with suitable example. 5

OR

(C) What is fault tolerance ? Describe fault tolerant design technique. 5

(D) Write a C++ program to illustrate the concept of Pure Virtual function. 5

5. Attempt **ALL** :

(A) What is an object and class ? Explain. 2½

(B) Write a C++ program to demonstrate the use of destructors. 2½

(C) What is pointer to object ? Explain. 2½

(D) Write a note on the following :

(i) Catch

(ii) Throw. 2½