NKT/KS/17/5303

Bachelor of Science (B.Sc.I.T.) Semester—II (C.B.S.) Examination

OBJECT ORIENTED PROGRAMMING USING "C++"

Paper—II

Time : Three Hours] [Maximum Marks : 50

Note :— (1) **All** questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagrams wherever necessary.

EITHER

1. (a) Explain the various object oriented features in C++. 5

(b) How will you define a member function inside the class and outside the class ? How will you access the member function of a class ? 5

OR

(c) Explain the access specifiers in C++. 5

(d) Write a program in C++ to count the number of objects created and number of objects alive. 5

EITHER

2. (a) What is a constructor ? Explain copy constructor with an example. 5

(b) What is unary operator overloading ? Write a program in C++ to overload the unary operator. 5

OR

(c) Explain the order of construction and destruction of objects in C++. 5

(d) What is operator overloading ? Explain the rules for operator overloading. Also name those operators which cannot be overloaded. 5

EITHER

3. (a) What are dynamic objects ? How is a dynamic object created and destroyed ? 5

(b) What is inheritance ? Explain single inheritance with an example. 5

OR

(c) Explain the different types of inheritances available in C++. 5

(d) Write a short note on Constructor and Destructor in Derived classes. 5

EITHER

4. (a) What are virtual functions ? Explain pure virtual functions with an example. 5

   (b) Explain the Exception Handling model in C++. 5

OR

   (c) Explain the fault tolerant design techniques in C++. 5

   (d) How are uncaught exceptions handled ? 5

5. Attempt **all** :

   (a) Write a short note on static data members. 2½

   (b) Differentiate between default constructor and parameterized constructor. 2½

   (c) Write a short note on abstract classes. 2½

   (d) Explain memory allocation failure exception. 2½