Subject Code—4260

M. Sc. EXAMINATION

(Third/Fourth Semester)

COMPUTER SCIENCE

MS-17

Object Oriented Programming Using C++

Time : 3 Hours   *Maximum Marks :* 100

Note : Attempt any *Five* questions. All questions carry equal marks.

1. What are Object Oriented Systems ? Also discuss their types.

2. (a) What is a Class ? How does it accomplish data hiding ?

   (b) What is a Friend Function ? What are merits and demerits of using friend functions ?

P.T.O.

3. What is a Constructor ? How do we involve a construction function ? Also describe the importance of destructors. How is dynamic initialization of objects achieved ?

4. What is Operator Overloading ? Why is it necessary to overload an operator ? When is a friend function compulsory ? Give an example.

5. What are the different forms of inheritance ? Give an example of each. What is a virtual base class ? When do we make a class virtual ?

6. What does polymorphism mean in C++ ? How is polymorphism achieved at (a) compile time, (b) run time ? What are the applications of 'this' pointer ? Explain.

7. (a) What is a Stream ? Describe briefly the features of I/O systems supported by C++. How do the I/O facilities in C++ differ from that in C ?

(b) How do the following two statements differ in operation ?

cin >> c;

cin.get(c);

8. (a) What is a file mode ? Describe the various file mode options available.

(b) What are the advantages of saving data in binary form ?

9. Write short notes on the following :

(a) Template

(b) Function Overloading

(c) Dynamic Binding.