

May-09

Roll No.

Subject Code—2060

M.C.S. EXAMINATION

(Fourth Semester)

MS-17

OBJECT ORIENTED PROGRAMMING USING C++

Time : 3 Hours

Maximum Marks : 100

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

1. Differentiate between a class and an object. Describe, how object oriented programming is better than structured programming ? 20
2. (a) Define Inheritance. Describe various types of inheritance. 10
(b) Discuss the role of inheritance in object-oriented programming. 10

3. (a) Describe various types of object oriented systems. 10
- (b) What is message passing ? Describe message passing mechanism with suitable example. 10
4. (a) Describe operator overloading with example. Compare it with overriding. 10
- (b) Write a program to overload '+' operator to add two quadratic equations. 10
5. Write a program to demonstrate file and string manipulation operations. 20
6. (a) What are virtual functions ? Why they are used ? Explain with suitable example. 10
- (b) What are abstract classes ? Describe use of abstract classes with suitable example. 10
7. (a) Discuss the role of constructor and destructor in object oriented programming with suitable example. 10

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(b) What is Buffering ? How is it used in
object oriented systems ? 10

8. What are concurrent object-oriented systems ?
Discuss major issues in the developed of
concurrent systems. 20