

M.C.M. Semester—I Examination
OBJECT ORIENTED PROGRAMMING
Paper—1 MCM 3

Time : Three Hours]

[Maximum Marks : 80

- N.B. :—** (1) Assume suitable data wherever necessary.
(2) Illustrate your answer with the help of a program/code wherever necessary.

1. (a) What is an inline function ? State the characteristics of inline function. Illustrate with an example. 8
(b) Explain how strings are represented. Describe any four string manipulation functions. 8

OR

2. (a) Explain the objects used for standard input and output along with the redirection operators. 6
(b) Describe any two looping structures in C++. 6
(c) List and describe the additional operators in C++ that are not supported in C language. 4
3. (a) What is operator overloading ? Write a program that overloads the operator '+' for concatenating two strings. 8

- (b) Define Class. Explain the various methods for defining the member functions of a class with the help of suitable example. 8

OR

4. (a) What is a Constructor ? State the characteristics of a constructor function. Describe types of constructor. 8
- (b) What are virtual functions ? State the rules for defining a virtual function. 8
5. (a) What is public inheritance ? Explain with suitable example. 8
- (b) Consider a program for exam system that consist of a class "student" which stores information of students. Derive a class "test" from "student" which manages the test data. Create another class "result" derived from "test" used to store result information. Complete the program using appropriate members. 8

OR

6. (a) What is inheritance ? Explain the types of inheritance. 8
- (b) Explain the use of constructors in derived class with suitable example. 8
7. (a) State and describe the syntax of Open () function for opening a file. Describe the various modes for opening a file. 6

- (b) Write a program that handles the "divide-by-zero" exception. 6

- (c) Explain the stream classes for I/O operations. 4

OR

8. (a) Explain various manipulators used to format the stream I/O. 6
- (b) Write a program that reads the contents of a file and count the number of lines from the file. 6
- (c) Explain the exception handling mechanism. 4
9. (a) Write a program for addition of two matrices. The elements of the matrices should be accessed using pointer arithmetic. 6
- (b) Explain array of pointers with the help of a suitable example. 6
- (c) What is "this" pointer ? Explain. 4

OR

10. (a) Write a program to sort 10 strings. Use array of pointers for representing the strings. 8
- (b) Can a pointer access the member of a class ? Explain with example. 8