

Total No. of Printed Pages:2

**SUBJECT CODE NO:- H-172**  
**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**S.E. (CSE/IT)**  
**Object Oriented Programming**  
**(REVISED)**

[Time: Three Hours]

[Max.Marks: 80]

Please check whether you have got the right question paper.

- N.B
1. Q.No.1 and Q.No.6 are compulsory.
  2. Solve any two from each section from remaining.

**Section A**

- |     |   |    |
|-----|---|----|
| Q.1 | Solve any five:   | 10 |
|     | <ol style="list-style-type: none"> <li>a) Give some characteristics of object oriented programming language.</li> <li>b) Define copy constructor.</li> <li>c) Illustrate with an example how the set w manipulator works?</li> <li>d) What is function prototype?</li> <li>e) What are the different argument passing techniques?</li> <li>f) Describe the major parts of C++ program.</li> <li>g) How does an inline function differ from a preprocessor macro?</li> </ol> |    |
| Q.2 | a) Define recursion. Write a program in C++ to find the factorial of a given number using recursion.  | 08 |
|     | b) What do you meant by overloading of a function? When do we use this concept?   | 07 |
| Q.3 | a) What is a friend function and what are the merits and demerits of using friend functions.  | 07 |
|     | b) Write a program to find larger number among two numbers using nesting of a member function concept.  | 08 |
| Q.4 | a) What is operator overloading? What are the rules for overloading the operators?  | 07 |
|     | b) Can we have more than one constructor in a class? If yes, explain such a situation with example.   | 08 |
| Q.5 | Write short notes on any three  | 15 |
|     | <ol style="list-style-type: none"> <li>a) Type conversion</li> <li>b) Object as a function argument</li> <li>c) Static data members</li> <li>d) Inline function</li> </ol>  |    |

**Section B**

- Q.6 Solve any five 10
- When do we use protected visibility specifier to a class member?
  - What are the memory management operators?
  - What is method overriding?
  - When do we make virtual function 'pure'?
  - List some of the file modes with its meaning.
  - Why are the words such as Cin and Cout are not considered as keywords?
  - What are the advantages to use exception handling mechanism in program?
- Q.7 a) What does 'this' pointer point to? What are the applications of 'this' pointer? 05
- b) What is multilevel inheritance? Write a program to display student roll number, marks in two subjects and total marks. 10  
 Consider class student stores the roll no, class test, stores marks of two subjects class result contains total marks obtained in test. The class result can inherit the details of the mark obtained in test and roll no of a student through multilevel inheritance.
- Q.8 a) What is a difference between opening a file with constructor function and opening a file with open () function. 07
- b) Explain the term stream class Hierarchy. 08
- Q.9 a) What should be placed inside the try block and catch block? When do you use multiple catch handlers? 07
- b) Distinguish between overloaded function and function template. 08
- Q.10 Write short notes on any three 15
- Command line argument
  - Ambiguity in multiple inheritance
  - Error handling during file operation
  - Constructor in derived classes