

Total No. of Pages 02

Roll No.

THIRD SEMESTER

B.Tech. (CO)

END SEMESTER EXAMINATION

NOVEMBER-2018

CO-203 Object Oriented Programming

Time: 3:00 Hours

Max. Marks: 40

Note: (i) Answer any five.

(ii) All questions carry equal marks.

(iii) Assume suitable missing data, if any.

(iv) Give suitable examples, wherever applicable

1. (a) Explain the important features of object oriented programming. 2
(b) Write a C++ program as follows to perform arithmetic operations addition and subtraction on Rational numbers of type x/y , where x and y are integers. Give a sample output. 4
(c) Operators which can't be overloaded and which can't be overloaded using friend function. 2
2. (a) Write a C++ program to perform 2D matrix operations determinant and transpose using class MATRIX, use appropriate constructor(s). 4
(b) What are virtual class, virtual function and pure virtual function? Explain the difference with a suitable examples. 4
3. (a) Write code to create and inherit class X into A and then A into B as virtual class, where X is having member $x1$ and A is having member $a1$ and both are having parameterised and other constructors. Create 3 objects of B. where B is having member functions `adddata()` and `displaydata()`. 4
(b) How can we restrict a function in throwing specific exceptions. Create multiple catch blocks (at least 3) in a program, one for int and one for all type of exceptions and show with the help of examples, that which catch block will be executed for int, float, char etc. 4

P.T.O

4. (a) Write a program to get the sum of all the members of a class into another class using class to class conversion. And using friend function (if possible) 4
- (b) Explain the use, syntax etc of pointer to members of a class. Is it different from pointer to object and pointer as member of a class, How? 4
5. (a) Explain the following 4
- (i) this pointer (ii) inline-function
- (b) Write a class which contains a method called getInstance. This method should return the number of instances of the class. Explain the technique applied. 4
6. (a) Distinguish between the following (Give suitable examples) 6
- (i) static and dynamic binding.
- (ii) Java and C++.
- (iii) overloaded function and function templates
- (b) What are the rules of function overloading. 2
7. Write short notes (any four) 8
- (a) Templates
- (b) JVM and JDK
- (c) Pointer to function
- (d) Rules for virtual function
- (e) Array of pointers