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3<sup>rd</sup> SEMESTER

**B.Tech. ICSE**

SUPPLEMENTARY EXAMINATION

Feb-2020

CO203: Object Oriented Programming

Time: 3:00 Hours

Max. Marks : 40

Note: Answer any five question. Question No. 1 is compulsory.  
Assume suitable missing data, if any.

Q.1 Answer all the following questions: [10]

- a) What is an abstract class?
- b) Explain inline functions.
- c) Define destructor and give example.
- d) Explain the two types of exceptions.
- f) What are the two ways of detecting end of file?

Q.2 a) What is nested class? Explain its features with help of an example. [4]

b) Illustrate how class objects can be written and read from the files. [4]

Q.3 a) Explain with an example to open, close, and write data to the file. [4]

b) What is a friend function? Are they a threat to the data hiding? [4]

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Q.4. a) Illustrate how an object can be created (within a function) and return to another function. [4]

b) Explain different components of standard template library. [4]

Q.5 a) What do you mean by dynamic initialization of class. Why do we need this? [4]

b) How does operator overloading support the concept of polymorphism. [4]

Q.6 a) Differentiate between public, private, and protected inheritance with suitable example. [4]

b) Differentiate between virtual and pure virtual function? [4]

Q.7 a) What do we need templates. How does it benefit programmers? Explain with example. [4]

b) Write a program that throws atleast two exception from a class. [4]