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**[5559]-186**

**S.E. (Computer) (First Semester) EXAMINATION, 2019**

**OBJECT ORIENTED PROGRAMMING**

**(2015 PATTERN)**

**Time : 2 Hours**

**Maximum Marks : 50**

**N.B. :—** (i) Answer Q. 1 or Q. 2, Q. 3 or Q. 4, Q. 5 or Q. 6 and Q. 7 or Q. 8.

(ii) Neat diagrams must be drawn wherever necessary.

(iii) Figures to the right indicate full marks.

(iv) Assume suitable data, if necessary.

**SECTION I**

- Q1) a) What are inline functions? What are their advantages? Give an example. [6]  
b) What do you mean by constructor and destructor? Write appropriate C++ program which uses copy constructor [6]

**OR**

- Q2) a) What is Multiple Inheritance? What is the ambiguity in Multiple inheritance? Give suitable example to demonstrate Multiple inheritance [6]  
b) Explain the use of explicit and mutable keywords with suitable examples [4]  
c) What is abstract class? Give suitable example [2]

- Q3) a) What is Friend Function? Explain with suitable example [4]  
b) Compare and contrast memory allocation and deallocation using new, delete [4]  
c) What is the concept of function pointers? Give suitable example in C++ [5]

**OR**

- Q4) a) Explain class template and function template with an example [4]  
b) What is Exception Handling? Explain How exception is handled in case of constructor and destructor with Example [6]  
c) Why we need templates in C++? [3]

- Q5) a) Write a program using the open(), eof() and getline() member functions to open and read file content line by line [6]  
b) What are the various functions to manipulate the file pointers? Explain with the help of Suitable examples [7]

**OR**

- Q6) a) What are command line arguments in C++? Write a program that returns size in bytes of a file Provided as command line argument. [10]  
b) Compare between early binding and late binding [3]

P.T.O.

- Q7) a) Elaborate forward, bidirectional and random- access iterators with examples. [6]  
b) What is a stack? How is it implemented using STL? [6]  
**OR**
- Q8) a) What is a container? List the container classes in C++. Explain any one of container [6]  
Class using a program.  
b) Write a program to implement Map using STL. [6]