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Seat No.	
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[5152]-565

S.E. (Computer) (First Semester) EXAMINATION, 2017
OBJECT ORIENTED PROGRAMMING
(2015 PATTERN)

Time : Two Hours

Maximum Marks : 50

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

1. (a) Explain friend function with example. [4]
(b) Consider the following declaration :

```
class TRAIN
{
    int trainno;
    char dest[20];
    float distance;
    public:
    void get( ); //To read an object from the keyboard
    void put( ); //To write an object into a file
    void show( ); //To display the file contents on the monitor
};
```

Complete the member functions definitions [8]

P.T.O.

Or

2. (a) List the features of Object-oriented programming. [3]
(b) What is Pointer, Smart Pointer and Shared Pointer. Explain using diagram and program [9]
3. (a) What is exceptional handling ? [3]
(b) Explain :
(i) Virtual base class
(ii) Abstract Class [4]
(c) What is generic programming ? How is it implemented in C++ ? [5]

Or

4. (a) Explain class template using multiple parameters. Write a program in C++. [8]
(b) Explain the significance of Static keyword in programming [4]
5. (a) Write the C++ file input and output program using seekg(), tellg(), read() etc member functions. [7]
(b) What are cin and cout ? Explain iostream. [6]

Or

6. (a) What are various functions which are used to manipulate file pointers ? Explain using examples. [7]
(b) Explain command line arguments in C++. Write program to explain the same. [6]

7. (a) Use minimum 8 functions of vector STL. Write a program to explain the same. [7]
- (b) What is STL ? List different types of STL containers. [6]

Or

8. (a) Write a program to implement Map using STL [6]
- (b) What is container ? List the container classes in C++. Explain any *one* of them using program [7]