Code No: R161215        **R16**        SET - 1

**I B. Tech II Semester Supplementary Examinations, Nov/Dec - 2017**
**Object Oriented Programming Through C++**

Time: 3 hours        (Comm. to CSE & IT)        Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**
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## PART –A

1.  a)  Compare the OOP Language and structured programming language        (2M)

    b)  Define constructor and give example        (2M)

    c)  What is Abstract class? Explain        (2M)

    d)  List the operators which are not possible to overload.        (2M)

    e)  How to protect the data with private inheritance?        (2M)

    f)  Explain the guide lines for defining template        (2M)

    g)  What is an iterator in STL?        (2M)

## PART -B

2.  a)  Explain the principles of Object Oriented Programming.        (7M)

    b)  What are the drawbacks of monolithic, procedural and structural programming languages?        (7M)

3.  a)  How to define a class in C++? How to declare objects for the class? Give an example.        (6M)

    b)  Write a program for calculating the total marks and Grade of the 60 students in a class.        (8M)

4.  a)  Write C++ Program to overload + operator to add two matrices.        (6M)

    b)  Write a C++ program to overload unary operator in complex numbers by using friend function.        (8M)

5.  a)  What is polymorphism? How it is achieved at compile time and runtime? Explain both with the help of example.        (7M)

    b)  Discuss in detail about virtual destructors.        (7M)

6.  a)  Write and explain the procedure to catch multiple exceptions thrown from a single try block.        (7M)

    b)  What is generic programming? Explain in detail about function templates.        (7M)

7.  a)  Explain the components of Standard Template Library (STL).        (7M)

    b)  Write a C++ program that erases all elements in a list using iterators.        (7M)