

Total No. of Questions :4]

SEAT No. :

PA-22

[5931]-32

[Total No. of Pages : 1

(Electronics & Computer /A.I. & D.S./ Computer Science &  
Design Engineering)

**OBJECT ORIENTED PROGRAMMING**  
**(2019 Pattern) (Semester-I) (210243)**

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4.
- 2) Assume suitable data, if necessary.

- Q1)** a) What is the use of 'this' pointer. Explain with Example [4]  
b) What are the different ways to define member functions of a class? Give Examples of Each [4]  
c) Define inline function. Write a C++ program for finding the area of a triangle using inline functions. [7]

OR

- Q2)** a) Compare Procedure oriented programming Vs Object oriented programming [4]  
b) What is difference between pointer and references? [4]  
c) Write C++ code that defines a class and declares and array of objects to that class [7]

- Q3)** a) Discuss the role of access specifiers in inheritance and show their visibility when they are inherited as public, private and protected. [4]  
b) Explain the void and null pointer with example [4]  
c) Write a C++ program to demonstrate pointers to base and derived classes [7]

OR

- Q4)** a) Explain friend function with example. [4]  
b) How are arrays represented using Pointers. Explain with example [4]  
c) Explain hybrid inheritance with a C++ example. [7]

