

Total No. of Questions : 8]

SEAT No. :

PE-4253

[Total No. of Pages : 2

[6582]-24

S.E. (Electronics / E & TC/EE(VLSI Design & Tech. /
E.C(A.C.T.)

**OBJECT ORIENTED PROGRAMMING (2019
Pattern) (Semester - IV) (204194)**

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Use of calculator is allowed.
- 5) Assume suitable data if necessary.

- Q1)** a) What is operator overloading? Why it is necessary to overload an operator? [6]
- b) Write a program to demonstrate friend function in C++ [6]
- c) What are the rules for overloading operators? [6]

OR

- Q2)** a) Explain friend function with example? [6]
- b) Write a program to overload pre and post increment operators for Complex class. [6]
- c) Give a programming example that overloads == operator with its use. [6]

- Q3)** a) Explain virtual base class and virtual function with example? [6]
- b) Discuss the ways in which inheritance promotes software reuse, saves time during program development and helps prevent errors. [6]
- c) What does inheritance mean in C++? What are different forms of inheritance? Give an example of each. [5]

OR

P.T.O.

- Q4)** a) Write a C++ program demonstrating use of the pure virtual function with the use of base and derived classes. [6]
b) Discuss the role of access specifiers in inheritance and show their visibility when they are inherited as public, private and protected. [6]
c) What is the ambiguity that arises in multiple inheritance? How it can be overcome. Explain with example. [5]
- Q5)** a) Explain exception handling mechanism in C++? Write a program in C++ to handle divide by zero exception. [6]
b) Explain class template using multiple parameters? Write a program in C++. [6]
c) What is stream? Explain types of streams available in C++? [6]
- OR
- Q6)** a) Explain Namespace in C++ with example? [6]
b) Write a C++ program using function template to find the product of two integer or floating-point type of data. [6]
c) What is a user defined exception? Write down the scenario where we require user defined exceptions. [6]
- Q7)** a) Write a program using the open(), eof (), and getline() member function to open and read a file content line by line. [6]
b) Explain the role of seekg(), seekp(), tellg(), tellp(), function in the process of random access in a file. [5]
c) What is file mode? Explain any four file modes supported by C++. [6]
- OR
- Q8)** a) Write a program using put() to write characters to a file until user enters a dollar sign. [6]
b) What is the difference between opening a file with constructor function and opening a file with open () function. [5]
c) Explain error handling during file operation. [6]

