

Total No. of Questions : 8]

SEAT No. :

PC2800

[Total No. of Pages : 2

[6352]-24

S.E. (Electronics / E & TC) Electronics & Computer)

OBJECT ORIENTED PROGRAMMING

(2019 Pattern) (Semester - IV) (204194)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Solve 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 indicate full marks.*
- 4) *Use of calculator is allowed.*
- 5) *Assume suitable data, if necessary.*

- Q1)** a) Explain Friend function with example. [6]
b) Which operators cannot be overloaded? Write steps to add two complex numbers using + operator overloading. [6]
c) Write down program to overload unary operators. [6]

OR

- Q2)** a) What are the rules for overloading operators? [6]
b) Explain the operator overloading. Also, explain different steps for overloading operator. [6]
c) Explain the concept of Binary operator overloading with example. [6]

- Q3)** a) What does inheritance mean in C++? Explain different forms of Inheritance. [6]
b) Explain the pure virtual function. State the rules for virtual function. [6]
c) Discuss the role of access specifiers in inheritance and show their visibility when they are inherited as public, private and protected. [5]

OR

- Q4)** a) Explain virtual base class and virtual function with example. [6]
b) What is the ambiguity that arises in multiple inheritance? How it can be overcome? Explain with example. [6]
c) Explain Containment and Inheritance along with examples. [5]

P.T.O.

- Q5)** a) What is stream? Explain types of streams available in C++. [6]
b) Write a program to swap two integer, two character and two float values using function template. [6]
c) Explain exception handling mechanism in C++. Write a program in C++ to handle divide by zero exception. [6]

OR

- Q6)** a) Write a program to illustrate class template using multiple parameters. [6]
b) Explain the following terms. [6]
i) Throwing mechanism
ii) Catching mechanism
iii) Multiple catch statements
c) Explain name space with example. [6]

- Q7)** a) Explain the classes for file stream operations. [6]
b) Write a program using put () to write characters to a file until user enters a dollar sign. [6]
c) Explain error handling during file operations. [5]

OR

- Q8)** a) Explain opening a file with constructor function and opening a file with open () function. [6]
b) Explain following functions for manipulation of file pointers. [6]
i) seekg()
ii) seekp()
iii) tellg()
c) Write a program using the open (), eof () and getline () functions to open and read file contents line by line. [5]

