

Total No. of Questions : 8]

SEAT No. :

P627

[Total No. of Pages : 2

[5869]-249

S.E. (Electronics / E & TC/Electronics & Computer)
OBJECT ORIENTED PROGRAMMING (2019 Pattern)
(Semester - IV)

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 in C++ to use scope resolution operator. [6]

c) What is friend function? What are the merits & demerits of using the friend function? [6]

OR

Q2) a) What are the rules for over loading operators. [6]

b) Which operators can not be overloaded? Write steps to overload + operator so that it can add two complex numbers. [6]

c) Write down program to overload unary operators? (Any three operators). [6]

Q3) a) Explain virtual base class & virtual function with example? [6]

b) What does inheritance mean in C++? What are different forms of inheritance? Give example of each. [6]

c) Discuss the ways in which inheritance promotes software reuse, saves time during program development and helps prevent errors. [6]

OR

P.T.O.

- Q4)** a) What is the ambiguity that arises in multiple inheritance? How it can be overcome. Explain with example. [6]
b) What are types of inheritance? Explain in detail. [6]
c) Discuss the role of access specifiers in inheritance and show their visibility when they are inherited as public, private protected. [6]

- Q5)** a) Write a C++ program involving a function template. [5]
b) Explain exception handling mechanism in C++? Write a program in C++ to handle divide by zero exception. [7]
c) Explain class template and function template with example. [5]

OR

- Q6)** a) Explain class template using multiple parameters? Write a program in C++. [7]
b) Explain name space with example. [5]
c) What is stream? Explain types of streams available in C++. [5]

- Q7)** a) What is File mode? Explain any four modes supported by C++. [6]
b) Explain error handling during file operations. [5]
c) What is the difference between opening a file with construction function & open () function. [6]

OR

- Q8)** a) Write a program using the open (), eof () & getline () functions to open & read file contents line by line. [6]
b) Explain file functions for text file and binary file operations. [7]
c) Explain file opening modes in detail. [4]

