

Total No. of Questions : 8]

SEAT No. :

P-3665

[Total No. of Pages : 2

[6002]-119

S.E. (E & TC/Electronics & Computer)
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 a friend function? What are the merits and demerits of using the friend function? [6]

b) What are the rules for overloading operators? [6]

c) Which is operator overloading? Write steps to overload << & >> operators. [6]

OR

Q2) 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) Give a programming example that overloads == operator with its use. [6]

Q3) a) What is inheritance? How to inherit a base class as protected? Explain it in Multiple base classes. [6]

b) What is containment? Explain with the help of String, Date and Employee class. Objects of Date and String classes are data members of Employee Class. [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]

