

Total No. of Questions : 8]

SEAT No. :

PD4070

[Total No. of Pages : 2

[6402]-29

**S.E.(Electronics/E & T.C/Electronic and Computer Eng./Electronics
Engineering (VLSI Design & Technology)/Electronics and
Communication -Advanced Communication Technology
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 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) Give a programming example that overloads == operator with its use. **[6]**
- c) What is operator overloading? Write steps to overload Pre and Post increment 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) What are the rules for overloading operators? **[6]**

- Q3)** a) What is inheritance? How to inherit a base class as Publicly? 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 array index out of bound 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 and merits in C++ with example? [6]
b) Write a C++ program using function template to swap two integers, floating-point types and character data. [6]
c) What is user defined exceptions? 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 # 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]

