

Total No. of Questions : 8]

SEAT No. :

P9116

[Total No. of Pages : 2

[6179]-242

S.E. (Computer / Computer Science & Design Engg./A.I&D.S.)

OBJECT ORIENTED PROGRAMMING

(2019 Pattern) (Semester-III) (210243)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.No.1 or Q.No.2, Q.No.3 or Q.No.4, Q.No.5 or Q.No.6, Q.No.7 or Q.No.8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Assume suitable data if necessary.
- 4) Use of Calculator is allowed.

Q1) a) Differentiate between compile time polymorphism and run time polymorphism. [5]

b) How do you declare and define a pure virtual function in C++? Explain with help of a program. [6]

c) Write a C++ program for unary increment (++) and decrement (--) operator overloading. [6]

OR

Q2) a) What is operator overloading and why it is useful? Which Operators cannot be overloaded. [5]

b) How virtual functions are implemented in C++? Explain with help of a program. [6]

c) Write a program to binary (+) and binary (-) operator in C++. [6]

Q3) a) Explain the use of command line arguments. If we want to pass command line arguments what will be prototype of main function and explain its arguments along with example. [5]

b) Explain the following file handling functions (solve any three). [6]

i) seekg ()

ii) tellg ()

iii) seekp ()

iv) tellp ()

c) Write a program Using the C++ file input and output class with open(), get(), put(),close() methods for opening, reading from and writing to a file. Use append mode while opening the file for writing. [7]

OR

P.T.O.

- Q4)** a) List and Explain different Mode bits used in open () function, while opening a file. (Any five). [5]
b) Define a class Person that has three attributes viz name, gender and age. Write a C++ Program that writes an object to a file and reads an object from a file. [6]
c) Explain what is fstream, ifstream and ofstream with help of example? Provide the hierarchy of stream classes in C++. [7]
- Q5)** a) Discuss exception handling mechanism in C++ with syntax. [5]
b) Write a program to handle exception using class type exception. [6]
c) Demonstrate function template with suitable code in C++. [6]
- OR
- Q6)** a) Explain exception handling in constructor, destructor. [5]
b) Write a program to demonstrate class template with example. [6]
c) Demonstrate overloading function template with suitable code in C++. [6]
- Q7)** a) What is an iterator? Explain how to use an iterator in C++ program with example. [5]
b) What is an algorithm in STL? Enlist algorithms and explain any algorithm in detail. [6]
c) What is a Map ? Write a program to implement map in C++. [7]
- OR
- Q8)** a) What is STL? Enlist and explain in short major components of STL. [5]
b) What is iterator and algorithm? Explain each of them with example. [6]
c) What is a vector? Enlist and explain any 5 functions of vector by using a C++ program. [7]

