

Total No. of Questions : 8]

SEAT No. :

**PB3635**

**[6261]-42**

[Total No. of Pages : 3

**S.E. (Computer Engineering)/(Computer Science & Design  
Engineering)/(AI & DS)**

**OBJECT ORIENTED PROGRAMMING  
(2019 Pattern) (Semester - III) (210243)**

*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) Draw Neat and Clean Diagram.
- 3) Assume Suitable data, if necessary.
- 4) Figures of the rights indicate full marks.

- Q1)** a) Explain need of operator overloading. What are the rules to be followed when overloading an operator in C++? [5]
- b) How virtual functions are implemented in C++? Explain with help of a program. [6]
- c) Define a class string and use binary overloaded operator (==) to compare two strings. [6]

OR

- Q2)** a) What is abstract base class in C++ polymorphism? Explain with program. [5]
- b) Explain Virtual destructor with the help of a program. [6]
- c) Write C++ program to demonstrate use of unary operator (- -) overloading using member function and unary operator overloading (++) using friend function. [6]
- Q3)** a) Explain the error handling in file I/O. [5]
- b) Explain the two ways in which files can be opened, open () and Using constructor with a program. [6]
- c) What is stream? Explain types of stream available in C++ i.e istream, ostream, ifstream and ofstream. [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) Explain the command line argument in C++ Write a program to explain the same. [6]
- c) Which header file do we use for file handling? Explain the following file handling functions [7]
- i) seekg ( )
  - ii) tellg ( )
  - iii) seekp ( )
  - iv) tellp ( )

- Q5)** a) What is exception in C++? Explain each keyword to handle exception in C++. [5]
- b) What is template function? Explain with suitable example. [6]
- c) Explain class template. Write a program to demonstrate class template in C++. [6]

OR

- Q6)** a) What do you mean by rethrowing exceptions. Write a program for the same. [5]
- b) What is generic programming? How it is implemented in C++. [6]
- c) Write a program in C++ to demonstrate class type exception handling in C++. [6]

- Q7)** a) What are the various algorithms available in STL? Explain any one with C++ program. [5]
- b) Write a program to implement map in C++. [6]
- c) What is a container? What are various types of containers? Explain any two containers in details. [7]

OR

- Q8)** a) What is the algorithm in STL? Explain sort function with example. [5]
- b) What is a sequential container? List various sequential containers. Compare arrays and vectors. [6]
- c) What is iterator? Write a program in C++ to demonstrate the use iterator. [7]

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