

Total No. of Questions : 8]

SEAT No. :

PD-4077

[Total No. of Pages : 2

[6402]-37

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

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

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Attempt Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Figures to the right indicate full marks.
- 3) Assume suitable data, if necessary.
- 4) Draw neat & clean diagrams if necessary.

- Q1) a)** Compare Function Overloading and Function Overriding. **[5]**
b) What is Virtual Function? Explain with example. **[6]**
c) Write a program to overload binary operator using member function. **[6]**

OR

- Q2) a)** Explain Virtual destructor with Example. **[5]**
b) What is late binding and early binding? How are they implemented in C++? Give the difference between the two types of binding. **[6]**
c) Write a program to overload binary operator using friend function. **[6]**

- Q3) a)** The I/O system of C++ contains which set of classes for file handling? **[7]**
b) What are different ways to opening the file for reading and writing operations? **[7]**
c) 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. **[4]**

OR

- Q4) a)** What are cin and cout objects? Explain ios, istream, ostream and iostream classes. **[7]**
b) Write a program to create a file, read and write student records into it. Every record contains Student Name, Roll Number and age . Store and retrieve atleast 3 records. **[7]**
c) What is a file mode? Describe the various file mode options available in C++? **[4]**

P.T.O.

- Q5) a)** What is use of type name and export keywords? [4]
b) What is generic programming? How is it implemented in C++? [6]
c) Write a Note on 1) unexpected() function 2) terminate() function
3) User defined exception 4) Exception and inheritance. [8]

OR

- Q6) a)** Explain Rethrowing exceptions with Example. [4]
b) Explain What is Function template and Class template using program.[6]
c) How exception specifications is used in exception handling with example. [8]

- Q7) a)** What is STL? List different types of STL containers. [4]
b) How stack can be implemented using STL. Explain with program. [6]
c) Write a program to illustrate STL heap sort. [8]

OR

- Q8) a)** Explain bidirectional and random access iterators with suitable example.[4]
b) Write a program to implement binary search algorithm using STL. [6]
c) Write C++ program using STL for sorting and searching user defined records such as Item records (Item code, name, cost, quantity etc) using vector container. [8]

