PB3635

[6261]-42

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 errror 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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