

Subject Name- Object Oriented Programming
Exam duration- 3 hours

Paper Code- IT222
Total Marks-100

1. Define a class named 'Train' representing following members: `10
Data members :- -
Train Number
- Train Name
- Source
- Destination
- Journey Date
- Capacity
Member functions:
- Initialise members
- Input Train data
- Display data
Write a C++ program to test the train class.
2. Write a C++ program to search an element in an array using pointers. 7
3. Write a C++ program that replaces the string "Mechanical" in the String "Diploma in Mechanical Engineering" with string "Civil". 8
4. Write a program to generate the electricity bill of a consumer as per the given conditions. If consumption is below 90, unit charge is Rs. 6/-; if consumption is below 190, the unit charge is Rs. 8/-; if consumption is greater than 190 and less than 310, the unit charge is Rs. 17/- and if consumption is more than 310 unit, print the comment as 'Meet the officer'. 10
5. Discuss about multiple inheritance. Write an object oriented program to apply the concept of multiple inheritance. 10
6. Create a class called Employee that includes three pieces of information as instance variables—a first name (type String), a last name (type String) and a monthly salary (double). Your class should have a constructor that initializes the three instance variables. Provide a set and a get method for each instance variable. If the monthly salary is not positive, set it to 0. Write a test application named EmployeeTest that demonstrates class Employee's capabilities. Create two Employee objects and display each object's yearly salary. Then give each Employee a 10% raise and display each Employee's yearly salary again. 15
7. Write a Program to find Maximum out of Two Numbers using friend function.
Note: Here one number is a member of one class and the other number is member of some other class. 10
8. What is a constructor? Can there be more than one constructor for a class? Justify. 7
9. With and illustration, demonstrate how a pointer to an object can be used to access the members of that object? 8
10. Write a Program using class to process Shopping List for a Departmental Store. The list include details such as the Code No and Price of each item and perform the operations like Adding, Deleting Items to the list and Printing the Total value of a Order. 15