Roll Number: _____   Name: _____

Thapar Institute of Engineering & Technology

Auxiliary Exam

Object Oriented Programming (UTA018)

Time: 2Hrs   Max Marks: 50

Date: Wednesday, 24/08/2022

Note: Attempt all five questions. Assume missing data if any.

Q1. Define a class named "Train" representing following members: [10]

Private Data members: -

- Train Number
- Train Name
- Source
- Destination
- Capacity

Member Functions

- Initialise data Members using constructor
- Input Train Data
- Display Data

Write a C++ Program to Test the train Class

Q2. Fill the blanks using a right keyword   [10]

a. The process of combining data and methods that enables them to be used as a single unit is called

_____.

b. The process by which object of a class acquires the properties from the object of another class is called

_____.

c. _____ principle of object oriented programming promotes reusability feature.

d. Using a function for multiple operations called as _____.

e. _____ is an act of representing essential features without including background details.

f. Using _____ C++ allows more than one definition for an operator in the same scope.

g. In C++, we use three keywords _____, _____ and _____ to perform exception handling.

h. If we do not specify a constructor, C++ compiler generates a _____ for object.

i. We can allocate and then deallocate memory dynamically using the _____ and _____ operators respectively.

j. A _____ can be given a special grant to access private and protected members.

Q3. Write a C++ program for Overloading + operator to concatenate two strings.   [10]

Q4. Write a C++ program to copy the content of first.txt from fifth character into second.txt and print

total number of characters present in second.txt on terminal.   [10]

Q5. a) Write difference between virtual function and pure Virtual Function.   [5]

b) Define class A   [5]

    Data members:

    Private: int num1

  Define class B

    Data members:

    Private: int num2

Write a program in C++ to perform addition (num1 + num2) operation using a friend function.