**Quiz No. 1**

**Total No. 5**

**Date: 7/3/22**

**1.** Write a class Book with three data members BookID, Pages and Price. It also contains following member function:

The get() function is used to input values.

The show() function is used to display values

The set() function is used to set the values of data members.

The getPrice() function is used to return the value of Price.

The program should create two objects of the class and input values and display the details of most costly book. Also initialize the data members through constructor.

**QUIZ No. 2**

**Total No. 5**

**Date: 30/3/22**

**Question #1:**

The atoms of different elements have different numbers of protons, neutrons and electrons. Electrons are negatively charged, protons are positively charged, and neutrons have no charge.

**a)** Define Atom class that contains:

(i) fields for storing the numbers of protons, neutrons and electrons with appropriate visibility;

(ii) ***getData*** and ***display*** methods for manipulating these fields, ensuring that minimum value for

electrons and protons is 1, and the minimum value for neutrons is 0;

(iii) a constructor that initialises new objects of Atom to be the smallest element (Hydrogen), for

which the number of protons is 1, the number of neutrons is 0, and the number of electrons is 1.

**b)** Write a new method for the Atom class called isIon that will return true or false. An atom is an ion if it is charged (i.e., if the number of electrons ≠ the number of protons).

**c)** Write a new method for the Atom class called getAtomicMassNumber that will calculate and return the atomic mass number of the atom. Atomic mass number of an atom (often denoted A) is defined as the number of protons plus the number of neutrons.

**Question #2:**

Consider the following main function. Assuming there is no error define the required classes such that the main function compiles and execute without any error:

int main() {

Samsung s1;

s1.setEMI(123456789); // setEMI() is function of class Mobile & 123456789 is a 9-digit EMI number.

s1.c1.getMegaPixel(); //c1 is an object of Camera class and the function returns int.

Samsung::display(); //displays company’s slogan “Do Bigger Things”

s1.show(); //show is a member of Mobile class and unable to change any variable value

return 0; }