Q1) Write a program in C# to create a base class named '**Vehicle**', and a derived class named '**Car**'. The base class has a constructor to initialize protected variables **company**, **country,** and **year** from keyboard, and a method named 'display' to display information of base class. A derived class has a constructor to initialize private variable **model** from keyboard, and a method named 'display' to display information of derived class, and method for **honk**. In main class, create object of base class and display information about base class, and create object of derived class by using name of base class, which can display information about derived class only.

……………….……………………………………………………………………………...…………….(**20** marks)

Q2) Answer **a** or **b**

a) Write a C# program that do the following: Creates a **List** of five integers elements, Adds 5 numbers to the list, Removes the second element by index, Checks if the number, exists in the list, Prints all elements using a foreach loop

b) Write a C# program that demonstrates the following: Creating an **ArrayList**, Adding different types of elements (int, string, double, bool), Display second element by index, Removing a double element by value, Printing all elements

……………….……………………………………………………………….……………...…………….(**20** marks)

Q3) Write instruction or instruction**s** for **only five** of the following:

1- Defined a method named 'Play' that can accessed it from a name of class and return integer value.

2- Create an integer array named 'Age' has three elements with initialize values (1, 2, 3).

3- Sort float array named 'Nums' in ascending order by one instruction.

4- Defined a method named 'AnimalSound**'** in Base class that can override in derived class.

5- Defined a generic method named 'Print' in Non-generic Class named 'Printer'.

6- Create a dictionary named 'numberNames' (key is int and value is string) with one initialize.

7- In List collection named 'List1', determine whether an element value (5) is in the List.

……………….……………………………………………………………….……………...…………….(**20** marks)

Q4) Answer a or b

a) Write a program in C# to do the following:

1. Create new class with two **private** variables (first is float array with three elements, and second is integer array with three elements).

2. Add constructor to initialize float array from keyboard.

3. Add two methods (first method to calculate number of number 1 on first float number and store in first integer array element, and **so on for others**, and method second for display array values).

4. Use main class for create object and implement methods.

b) Write a program in C# to do the following:

1- Create new class with two **public** variables (first is array of string for three names, and second is array of integer for three numbers).

2- Add constructor to initialize variables values of class from keyboard.

3- Add two methods (first method to calculate number of letter '**b**' on first string and store in first integer array element, and **so on for others**, and method second for display array values).

4- Use main class for create object and implement methods.

…………………..…………………………………………………………………………...…………….(**20** marks)

Q5) Write instruction or instruction**s** for **only five** of the following:

1- Input float variable named 'Price' from keyboard.

2- Defined a method named 'Sum' that receiving any number of integer type as input to method and long type as output result.

3- Display elements of array named 'Collections' that has any type, any size, and any value.

4- Create a string property named 'Name' that is Auto implemented.

5- Define an enumeration class named 'Level' with three elements (Low, Med, High), and its integer values (2, 3, 4).

6- Create non Generic Collections variable named 'Info' that has following elements (4, 'A', 3.5, true, "Bill").

7- Check if the input integer data from keyboard is correct.

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