Fall-2023

2nd year 1st S

Course Code: CSE 201 Course Title: Object-Oriented Programming I

Credit:

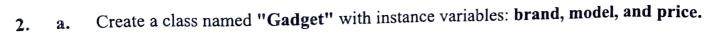
Time: 1.00 Hour.

Full Ma

There are Three Questions. Answer all of them. Part marks are shown in the margins.

- 1. a. Explain different types of access modifiers in Java with proper examples.
 - b. Write a java program that will declare 2 arrays of size n (you can take the array elements as input from the user) and create a 3rd array of the same size in such a way that the pth index of the 3rd array contains the total number of elements of the 2nd array which are greater than the pth index of the 1st array.

 For example, if the 2 arrays are {1,3,6,2} and {2,3,4,5} then your program should generate a 3rd array with elements {4,2,0,3} and print the array as well. (N.B. Here the first element of the 1st array is 1 and all four elements of the 2nd array are greater than 1, that's why the first element of the 3rd array is 4.)



- i) Implement a constructor to initialize these variables.
- ii) Implement the following methods:
 - public String getBrand(): Returns the brand of the gadget. Also, prints a message indicating the brand of the gadget.
 - public void setPrice(double newPrice): Updates the price of the gadget to the newPrice. Also, display the updated price.
 - public boolean is Affordable(): Returns true if the price of the gadget is less than or equal to 1000, otherwise returns false. Also, display whether the gadget is affordable.

b. Create a class named "TestGadget" with a main method.

In the main method, perform the following steps:

- i) Create an object of the Gadget class with the **brand** as "Samsung", **model** as "Galaxy S20", and **price** as \$999.99. Store the reference of the object in a variable named **myGadget**.
- ii) Call the setPrice(...) method using myGadget variable and pass 1100 as the value of the parameter.
- iii) Call the isAffordable() method using myGadget and print the output of this method call.
- iv) What is the output of the previous step (iii)?

Identify the errors in the code below. Also, fix the errors.

[4] CO4

```
package mid;
3⊟public class Exam {
    String semester;
    public static double totalMarks;
    private double attained warks;
7
    public static void updateInfo(String sem,double tMark)
-9 ⊟ {
      semester = sem;
10
      totalMarks = tMark;
12
    }
    package mid.fall;
   ⊟public class Test {
     public static void main(String[] args)
       Exam exam =new Exam("Fall 2023", 15);
       exam.attainedMark = 10.5;
       Exam.updateInfo("Fall 2023", 20);;
9
10
```