University of Asia Pacific

Department of Computer Science & Engineering

Mid-Semester Examination Spring -2021

Program: B. Sc. Engineering (2021 Year/ Spring Semester)

Course Title: Object Oriented Programming II: Visual and Web Programming

Course No: CSE 309   Credit: 3.00

Time: 1.00 Hours.   Full Mark: 60

There are **Four** Questions. Question no 1, 2 are compulsory. Answer any of 3 or 4. All questions are of equal value. Figures in the right margin indicate marks.

In case of writing python codes, be careful about the indentations.

1.	a)	Explain the difference between Class Attribute and Instance Attribute with examples.	[8]
	b)	Suppose, we have four class named **Vehicle, Car, Truck**, and **Rickshaw**. Write a Program to incorporate the following instructions. **i) Vehicle** class has two attributes: **Speed** [in Km/h], **Number_of_Wheel** and a method **Information (self)** which prints the **Speed** in Km/h and **Number_of_Wheel**. **ii) Rickshaw** inherits the property of the **Vehicle** class and rewrite the **Information (self)** so that it can print the **Speed** in m/s and **Number_of_Wheel**. **iii) Car** and **Truck** class inherit the property of the **Vehicle** class and include new attribute named **Fuel_Type**. [Suppose car use gas and truck use diesel]. Rewrite the **Information (self)** so that it can print the **Speed** in Km/h, **Fuel_Type** and **Number_of_Wheel**.	[12]
2.	a)	Explain the difference among inline, internal, and external CSS with examples.	[10]
	b)	Write down an HTML code to generate a form that can take the following user input. i) First Name ii) Last Name iii) Gender [radio] iv) Password v) Profile image	[10]

3.	a)	Write down python code according to the following instructions. i) Create an empty list. ii) Take an integer value n from your input. iii) Write a for loop to take n integer numbers from user and append into the empty list. iv) Suppose the list has duplicate values. Now, write a program to remove all the duplicate values from the list. v) Suppose the list has both positive a negative numbers. Now, write a program to sort the list using the square of each number. **[Must use custom function]**	[20]
		or,	
4.	a)	Write down python code according to the following instructions. i) Create an empty list using list constructor. ii) Take an integer value n from your input. iii) Write a for loop to take n integer numbers from user and append into the empty list. iv) Create a new list from the existing list by replacing each positive number with its cube and each negative number with its square. **[Hints: use if else]** v) Do the same task in (iv) using **List Comprehension**.	[20]