Department of Electrical Engineering
Mid – Term Assignment Spring 2020
Date: 13/04/2020

Course Details

Course Title: Programming Fundamentals   **Module:** 02

Instructor: ENGR.SIR WAQAS   **Total Marks:** 30

Student Details

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DEPTT. BE(E)   **SEMESTER:** 2ND

Q:1.	(a)	Write a program in python where you input two integer values from user and determine if the first integer is the multiple of the second integer.	Marks 5 CLO 1
	(b)	Write a program in python for a shopping mall to determine if the customer has exceeded the credit limit on a charge account. Program should input the following facts in five variables 1. Account number 2. Balance at the beginning of month (Beginning balance) 3. total of all items charged by customer this month (charges) 4. total of all credits (credits) 5. allowed credit limit Calculate the new balance New balance = Beginning balance + charges – credits Your program must determine if the new balance exceeds the allowed credit limit. If credit limit is exceeded then program should display the message "Credit Limit exceeded."	Marks 5 CLO 1

Q2.	(a)	1. Steps that involve precise sequence to solve a problem is called
		    a. Statement b. Program
		    c. Utility d. Routine
		 2. In an if structure statements are executed only,
		    a. When the condition is false b. When it contain arithmetic operators
		    c. When it contain logical operators d. When the condition is true
		 3. Which of the following can not be a variable name?
		    a. area b. _area
		    c. 10area d. area2
		 4. Which loop process is best when the number of iterations is known?
		    a. for b. while
		    c. again d. all looping processes require that the iterations be known
		 5. Which special character is in the end of a string to indicate the end?
		    a. new line b. tab
		    c. null d. carriage return
		 6. A total of _____ bytes are occupied by the following variable.
		 txt = "programming fundamentals"
		 7. Commenting the code _____
			Marks 14 CLO 1

		a. Makes a program easy to understand for others. c. Makes it difficult to compile	b. Make programs heavy, i.e. more space is needed for executable. d. All of the given options	
Q3.	(a)	Write a program in python that will create and display the following series in the output using the formula $2x^2 - 3x$: 65, 44, 27, 14, 5, 0, -1, 2, 9, 20	Marks 2 CLO 1
	(b)	You have the following python code, draw the flow chart of the whole code numbers = range(10,20) sum = 0 for i in numbers: sum = sum + i print("Total Sum = ", sum)	Marks 3 CLO 1

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SUBJECT: PROGRAMMING FUNDAMENTALS

INSRUCTOR: ENGR.SIR WAQAS

QNO. 1 (a)

Ans:-

```
def is multiple (x,y):
    if x! = 0 and (y % x) = 0
        print ("True")
    else:
        print ("faplse")


print ("A programme in python")
x = int (input ("enter a number:"))
y = int (input ("enter its multiple:"))
is multiple (x, y )
```

Q NO. 2 (a)

1 (Ans)   =   Programme

(2)   Ans =   when The condition is true.

3 (Ans) =   10 area

4 (Ans)=   For

5 (Ans) =   null

6 (Ons) = $21 + 1 = 22$

7 (Ans) =   make a programme easy
to understand for others.

Q NO. 3 (b)

Flowchart:-

```
                    ┌──────────┐
                    │  Start   │
                    └──────────┘
                         │
                         ▼
         ┌──────────────────────────────────┐
         │  Read    limit of numbers, N     │
         └──────────────────────────────────┘
                         │
                         ▼
              ┌────────────────────┐
              │   i = 10           │
              │   sum = 0          │
              └────────────────────┘
                         │
                         ▼
         ┌──────────────────────────────┐        yes
         │  whether  i = 20             │ ─────────────►
         │  reached ?                   │
         └──────────────────────────────┘
                         │ NO
                         ▼
              ┌────────────────────┐       False
              │  if    sum = 0     │ ─────────────►
              └────────────────────┘
                         │ True
                         ▼
         ┌──────────────────────────────────┐
         │  compute  sum = sum + i           │
         └──────────────────────────────────┘
                         │
                         ▼
         ┌──────────────────────────────────┐
         │  compute      i = i + 10          │
         └──────────────────────────────────┘
                         │
                         ▼
         ┌──────────────────────────────────┐
         │  Print  sum of whole NO., sum     │
         └──────────────────────────────────┘
                         │
                         ▼
                    ┌──────────┐
                    │  Stop    │
                    └──────────┘
```