## Course Details

| Course Title: | Programming Fundamentals | Module: | 02 |  |
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| Instructor: | Sir Waqas |  | Total Marks: |  |

## Student Details

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| Q1. | (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. <br> Ans:- <br> firstNo $=\operatorname{int}($ input("Enter your first Number: ")) <br> secondNo = int(input("Enter your first Number: ")) <br> if $($ firstNo $\%$ secondNo $)=0$ : <br> print('First Number is the multiple of Second Number') <br> else: <br> print('First Number is not the multiple of Second Number') | $\begin{gathered} \hline \text { Marks } 5 \\ \hline \text { CLO } 1 \end{gathered}$ |
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|  | (b) | Write a program in python for a shopping mall to determine if the customer has exceeded the credit limit on a charge account. <br> Program should input the following facts in five variables <br> 1. Account number <br> 2. Balance at the beginning of month (Beginning balance) <br> 3. total of all items charged by customer this month (charges) <br> 4. total of all credits (credits) <br> 5. allowed credit limit <br> Calculate the new balance <br> New balance $=$ Beginning balance + charges - credits <br> Your program must determine if the new balance exceeds the allowed credit limit. If credit <br> limit is exceeded then program should display the message "Credit Limit exceeded." <br> Ans:- <br> accountNo = int(input("Enter Account Number: ")) <br> beginningBalance $=\operatorname{int}($ input("Enter Balance in Beginning of month: ")) <br> charges $=\operatorname{int}($ input("Enter Charges: ")) <br> credits $=\operatorname{int}($ input("Enter Credits: ")) <br> creditLimit $=\operatorname{int}($ input("Enter Credit Limits: ")) <br> newBalance $=($ beginningBalance + charges $)-$ credits <br> if newBalance > creditLimit: <br> print('Credit Limit exceeded!') | Marks 5 |
| Q2. | (a) | 1. Steps that involve precise sequence to solve a problem is called <br> a. Statement <br> b. Program <br> c. Utility <br> d. Routine <br> 2. In an if structure statements are executed only, <br> a. When the condition is false <br> b. When it contain arithmetic operators <br> c. When it contain logical operators <br> d. When the condition is true <br> 3. Which of the following can not be a variable name? <br> a. Area <br> b. _area <br> c. 10area <br> d. area2 | Marks 14 |


|  |  | 4. Which loop process is best when the number of iterations is known? <br> a. For <br> b. while <br> c. again <br> d. all looping processes require that the iterations be known <br> 5. Which special character is in the end of a string to indicate the end? <br> a. new line <br> b. tab <br> c. null <br> d. carriage return <br> 6. A total of $\qquad$ bytes are occupied by the following variable. txt $=$ "programming fundamentals" <br> 7. Commenting the code $\qquad$ <br> a. Makes a program easy to <br> b. Make programs heavy, i.e. more understand for others. space is needed for executable. <br> c. Makes it difficult to compile <br> d. All of the given options |  |
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| Q3. | (a) | Write a program in python that will create and display the following series in the output using the formula $2 \mathrm{x}^{2}-3 \mathrm{x}$ : $65,44,27,14,5,0,-1,2,9,20$ <br> Ans: $\begin{aligned} & \text { values }=[6.5,5.5,4.5,3.5,2.5,1.5,0.5,-1.5,-2.5] \\ & \text { seq }=[] \end{aligned}$ <br> for val in values: $\begin{aligned} & \text { formula }=\operatorname{int}((2 *(\text { val } * * 2))-3 * \text { val }) \\ & \text { seq.append(formula) } \end{aligned}$ seq | Marks 2 |
|  | (b) | You have the following python code, draw the flow chart of the whole code numbers $=$ range $(10,20)$ <br> sum $=0$ <br> for i in numbers: $\text { sum }=\operatorname{sum}+i$ <br> print("Total Sum = ", sum) <br> Ans: $\text { numbers }=\text { range }(10,20) \# \text { Number Represent values from } 10 \text { to } 20==>10,11,12,13,14 \ldots . \ldots 20$ <br> sum $=0$ \# Sum initially hold value 0 <br> for $i$ in numbers: \#Loop will iterate from values 10 to $20 \Rightarrow=>i=10, i=11, i=12 \ldots . . i=20$ <br> sum $=$ sum +i \# It will sum the numbers the ith value like $0+10$--> $10+11$-->21+12...... sum +20 <br> print("Total Sum = ", sum) \# It will print the sum of all the numbers between 10 to 20 and that is 145 | Marks 3 |

