	ADAMAS UNIVERSITY		
	END-SEMESTER EXAMINATION: JANUARY 2021		
	(Academic Session: 2020 – 21)		
Name of the Program: (Example: B. Sc./BBA/MA/B.Tech.)	**B.Tech**	**Semester:** (I/III/ V/ VII/IX)	**III**
Paper Title :	**Engineering Science Course (Introduction to Python)**	**Paper Code:**	**ECS42107**
Maximum Marks :	**40**	**Time duration:**	**3 Hours**
Total No of questions:	**08**	**Total No of Pages:**	**02**
(Any other information for the student may be mentioned here)	**Instruction for the Candidate:** 1. At top sheet, clearly mention Name, Univ. Roll No., Enrolment No., Paper Name & Code, Date of Exam. 2. All parts of a Question should be answered consecutively. Each Answer should start from a fresh page. 3. Assumptions made if any, should be stated clearly at the beginning of your answer.		

Answer all the Groups

Group A

(Answer all the questions)

1×5=5

1.

    a. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

       30=To
       for K in range(0, To)
       IF k%4==0:
       print (K*4)
       Else:
       print (K+3)

    b. How pass statement is different from a comment?

    c. What is the difference between append () and extend () function in list datatype?

    d. List a is defined as follows:

       a = [1, 2, 3, 4, 5];

       Write down all statements that remove the middle element 3 from a so that it equals [1, 2, 4, 5].

    e. What are mutable and immutable types?

Group B

(Answer any three questions)

5×3=15

2. Write a program to repeatedly check for the largest number until the user enters "**done**".   **5**

3. List and explain different arithmetic operators supported by Python   **5**

4. Solve a Python program to read a word and print the number of letters, vowels and percentage of vowels in the word using a dictionary.   **5**

5. Explain the use of join () and split () string methods with examples. Describe why strings are immutable with an example.   **(3+2)**

Group C

(Answer any two questions)

6. a. Write a Python program to check if a 3-digit number is Armstrong number or not.   **6**

   b. Write Python program to check for the presence of a key in the dictionary and find the sum of all its values.   **4**

7. a. Write Pythonic code to create a function called most_frequent that takes a string and prints the letters in decreasing order of frequency. Use dictionaries.   **8**

   b. List the rules to name an identifier.   **2**

8. a. Write a recursive Python function that recursively computes sum of elements in a list of lists.

   Sample Input: [1, 2, [3,4], [5,6]] Expected Result: 21   **8**

   b. Write Python script that prints calendar of November 2019.   **2**