

**MID-TERM EXAMINATION****(B.Tech. CSE-AI/AI & ML)****1<sup>st</sup> semester (January, 2023)****OFFLINE mode****Subject Code: BAI-110****Subject: Programming With Python****Time : 1 ½ Hours****Maximum Marks : 30****Q1 Attempt all Parts****(2.5\*4)**

- (a) Write a Python program to count the number of even and odd numbers from a series of numbers.
- (b) Explain different types of datatypes in python.
- (c) Write a program to check if the word 'open' is present in the "This is open source software".
- (d) Explain with examples different types of list operators in python.

**Q2 (Attempt any Two Parts )****(5,5)**

- (a) Explain various types of operators in python. Write a program to find the square of a number.
- (b) With the necessary examples describe the use of continue and break statement. Write a Python program that prints all the numbers from 0 to 6 except 3 and 6.
- (c) Write a python program to print the following alphabet pattern :

```

ABCDEFEDCBA
ABCDEDCBA
ABCD CBA
ABCBA
ABA
A

```

**Q3 (Attempt any Two Parts )****(5,5)**

- (a) What is a local variable? How is it different from global variable? Write a python function to find the factorial of a non-negative number.
- (b) Write a Python program to print the even numbers from a given list.  
Sample List: [1, 2, 3, 4, 5, 6, 7, 8, 9]  
Expected Result: [2, 4, 6, 8]

(c) Write the python program the print the given series : 14, 28, 20, 40, 32, 64, 50, 100

$\begin{matrix} \times 2 & \times 2 & \times 2 & \times 2 \\ 14 & 28 & 20 & 40 & 32 & 64 & 50 & 100 \\ +6 & +12 & +18 & \end{matrix}$