University of Engineering & Management, Kolkata

Odd Semester Examination, February, 2021

Course: B. Tech   Semester: 1st

Paper Name: Computer Programming and Problem Solving using Python and C - I

Paper Code: ESC181

Full Marks: 100   **Time: 3 Hours**

Instructions:

1. Students need to answer all questions of the allotted Set.
2. The answers should be written in white papers (preferably A4, but not mandatory).
3. The First page of the answer script must have Students Name, Section, Class Roll, Enrolment Number and Registration Number written at the top.
4. Subsequent pages must have Section and Roll Number written at the top.
5. The entire answer script is needed to be scanned and a single PDF file should be submitted.
6. The file name should be "Section_Roll.pdf" (e.g. A_100.pdf)

Set - 1

1. Write a C program to print the following pattern up to 'n' lines where 'n' is user given:

```
                A
          A     B     A
    A     B     C     B     A
```
   …………………………………………..

2. Write a C program to print all prime numbers up to 'n' where 'n' is user given.
3. Write a C program to declare a two-dimensional integer array of size 2×3. Read user given numbers to store in the array. Now print the sum of the column wise maximum of the numbers stored in the array.
4. Write a C program to read a user given string of length 'n' where 'n' is user given. Find the length of the string. Do not use 'string.h'.