# OCT/FE/Insem-7
## F.E. (Semester - I)
## PROGRAMMING AND PROBLEM SOLVING
## (2019 Pattern)

*Time : 1 Hour]*                                                    *[Max. Marks : 30*

**Instructions to the candidates:**
1) *Solve Q1 or Q2, Q3 or Q4.*
2) *Neat Diagrams must be drawn wherever necessary.*

*Q1)* a) What are identifiers? List the rules to name an identifier.        **[3]**

b) Explain different data types supported by Python.               **[5]**

c) What is a problem? List down steps in problem solving.          **[4]**

d) Write an Algorithm to find sum of 'n' natural numbers.          **[3]**

### OR

*Q2)* a) Explain the use of Indentation in Python.                     **[3]**

b) What is an operator? Enlist various types of operators.         **[5]**

c) What is modularization? Explain top down design approach.       **[4]**

d) Write an algorithm to swap two numbers.                         **[3]**

*Q3)* a) Explain selection/conditional statements in Python.           **[4]**

b) Explain while loop with flowchart.                              **[3]**

c) Write a program in Python to find whether gives is even or odd. **[3]**

d) What is difference between 'break' and 'continue' statement in Python? Explain with example.                                      **[5]**

### OR

*Q4)* a)  What is dictionary? How to add and remove elements in dictionary? **[4]**

b)  What is a list? Explain accessing and removing of elements from list with example. **[3]**

c)  Explain for loop with flowchart. **[3]**

d)  Write a program to print the following pattern. **[5]**

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