H Roll No. .....

TCS–320

B. TECH. (CSE) (AI & ML)

(THIRD SEMESTER)

MID SEMESTER EXAMINATION, 2021

APPLICATION BASED PROGRAMMING IN PYTHON

Time : 1½ Hours

Maximum Marks : 50

Note : (i) Answer all the questions by choosing any ***one*** of the sub-questions.

(ii) Each question carries 10 marks.

1. (a) List the properties of variable with examples. 4 Marks (CO3)

(b) Explain if, if....else and elif decision-making statements with example. 6 Marks (CO3)

P. T. O.

OR

(c) Discuss the different types of loop control statements in python with example.

10 Marks (CO3)

2. (a) Develop a program to determine whether the entered character is vowel or consonant. 5 Marks (CO1)

(b) Develop a program to read a number and calculate the sum of its digits. 5 Marks (CO1)

OR

(c) Define Python and list its importance.

4 Marks (CO1)

(d) Let x = 8 and y = 2. Write the values of the following expressions : 6 Marks (CO1)

- (x + y) * 3
- x ** y
- x % y
- x / 12
- x // 6
- (X + Y)//(X – Y)

3. (a) Discuss adding, retrieving, deleting and traversing items in dictionary with examples. 10 Marks (CO4)

OR

(b) Explain any *five* list methods with example. 10 Marks (CO4)

4. (a) Implement Binary search algorithm in python programming language. 5 Marks (CO2)

(b) Implement Bubble sort algorithm in python programming language. 5 Marks (CO2)

OR

(c) For a given list num = [45, 22, 14, 65, 97, 72], develop a python program to replace all the integers divisible by 3 with "ppp" and all integers divisible by 5 with "qqq" and replace all the integers divisible by both 3 and 5 with "pppqqq" and display the output. 5 Marks (CO2)

P. T. O.

(d) Write a program to create a list with elements 1, 2, 3, 4 and 5. Display even elements of the list using list comprehension. 5 Marks (CO2)

5. (a) List out all the useful string methods which supports in python. Explain with an example for each method. 10 Marks (CO5)

OR

(b) Develop a menu based program to perform the operation on stack using list.

10 Marks (CO6)