**R16**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**
**B. Tech IV Year I Semester Examinations, December - 2019**
**PYTHON PROGRAMMING**
**(Common to CSE, IT)**

**Time: 3 Hours**                                                                  **Max. Marks: 75**

**Note:** This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b as sub questions.

## PART – A

**(25 Marks)**

1.a) State any four applications where python is more popular.                   [2]
  b) List out the main differences between lists and tuples.                     [3]
  c) What are the uses of File object?                                           [2]
  d) Give a brief description of several Built-in attributes related to File objects.   [3]
  e) Summarize the purpose of pipe and dot symbols used for pattern matching.    [2]
  f) Explain the basic functionality of match( ) function.                       [3]
  g) What is the need of Tkinter module in python?                               [2]
  h) How to create Label widget in Python?                                       [3]
  i) State the need of persistent storage.                                       [2]
  j) Discuss the SQL commands/statements used for creating, using and dropping a database.
                                                                                  [3]

## PART – B

**(50 Marks)**

2.a) How to declare and call functions in Python programs? Illustrate with an example script.
  b) List and explain few most commonly used built-in types in python.          [5+5]

OR

3.  Summarize various operators, built-in functions and standard library modules that deals with Python's numeric type.                                              [10]

4.  Explain the following file built-in functions and method with clear syntax, description and illustration:
    a) open( )      b) file( )       c) seek( )       d) tell( )       e)read( )       [10]

OR

5.a) How does try-except statement work? Demonstrate with an example python code.
  b) Illustrate the concept of importing module attributes in python scripts.   [5+5]

6.  Examine how python supports regular expressions through the 're' module with brief introduction and various built-in methods related to it.                     [10]

OR

7.a) What is the motivation behind parallelism and state how python achieves parallelism?
  b) Explain briefly about thread and threading module objects in Python.       [3+7]

8.     Consider a Python GUI program that produces a window with the following widgets using python code:

a) A button to retrieve the next value in that list(if there is one).This button is displayed if there is no next value in the list

b) A label to display the number of the items being displayed and the total number of items [10]

OR

9.     Give an overview and demonstration of building web applications using python's cgi module. [10]

10.a)   What is a cursor object? Explain various methods and attributes of cursor object.

b)    What do you mean by a constructor? List and describe various constructors used for converting to different data types. [5+5]

OR

11.    Describe in detail about Python SQLAlchemy ORM with a case study of Employee role database. [10]

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