

**R16**

**Code No: 137GD**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech IV Year I Semester Examinations, January/February - 2023**

**PYTHON PROGRAMMING**

**(Common to CSE, IT)**

**Time: 3 Hours**

**Max.Marks:75**

**Note:** i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

**PART – A**

**(25 Marks)**

- 1.a) What is a python object? List its characteristics. [2]
- b) Illustrate the internal structure of a python program file. [3]
- c) Define the terms persistent storage. [2]
- d) Demonstrate IndexError and SyntaxError in an example python scripts. [3]
- e) What are Regular Expressions? [2]
- f) Write about the special characters that represent character sets. [3]
- g) What are windows and widgets in GUI programming? [2]
- h) What is the relationship between child and parent windows? [3]
- i) What is the purpose of DB-API? [2]
- j) Write down the basic features of python ORM SQL object. [3]

**PART – B**

**(50 Marks)**

- 2.a) Discuss the most commonly used built-in functions and standard type operators in python.
- b) What is a Dictionary? Give a brief note on dictionaries in python. [6+4]

**OR**

- 3.a) Mention some rules, guidelines and certain symbols used with regard to statements in python.
- b) List various sequence type conversion factory functions and explain their purpose. [5+5]

- 4.a) Explain various file built-in methods available in python.
- b) Write a python program to take a file name as input and display the result with the number of lines in that text file. [5+5]

**OR**

- 5.a) Demonstrate the concept of handling multiple exceptions in an example python program.
- b) What are modules? How data are imported from modules into your programming environment? [5+5]

6. List the more popular regular expression functions and methods from the re module. Give a brief description about each with an illustrative example. [10]

**OR**

- 7.a) Differentiate between processes and threads.
- b) Explain various thread module functions and Lock object methods available in python. [4+6]

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8. Present a python code to demonstrate and explain how a Tkinter application is set up with Label, Button and Scale Widgets. [10]

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9. Provide an overview of urllib module in python for web surfing. [10]

OR

10. Illustrate the layers involved in writing a Python database application, with and without an ORM. [10]

OR

11. Write python code for SQLAlchemy application and swap with the MySQL as the back-end RDBMS for another application. [10]

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