P131/ICT152/EE/20230112

Time : 3 Hours   **Marks : 80**

Instructions :

1. All Questions are Compulsory.
2. Each Sub-question carry 5 marks.
3. Each Sub-question should be answered between 75 to 100 words. Write every questions answer on separate page.
4. Question paper of 80 Marks, it will be converted in to your programme structure marks.

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1. Solve any **four** sub-questions.
   a) What are data types? How do you check the data type of a variable?   5
   b) Explain the working of while loop with an example.   5
   c) What is set in Python and its operations?   5
   d) Write a Python program to perform linear search   5
   e) Explain how classes and objects are created in Python with example.   5

2. Solve any **four** sub-questions.
   a) What are fruitful functions and void functions in Python?   5
   b) What is an exception? How we handle exceptions in Python?   5
   c) What is the use of regular expression in Python?   5
   d) What are the different ways to create strings in Python?   5
   e) Write a program in python to check the given year is leap year or not.   5

3. Solve any **four** sub-questions.
   a) What are mutable and immutable types in Python?   5
   b) What are Metacharacters in Python? List any five of them.   5
   c) Explain random module and it's function.   5
   d) Compare and contrast lists and tuples in python   5
   e) Write a note on string slicing in python.   5

4. Solve any **four** sub-questions.
   a) What is a list? How can we iterate through a list?   5
   b) How you can append data in file? Explain through example.   5
   c) What are Python widgets? Explain functionality of any one widget.   5
   d) Write a note on matplotlib of python.   5
   e) Write the steps to fetch data from SQLite database in Python?   5