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| **Program:** | **S.Y.B.Sc IT** | **Semester:** | **III** | **Program Code:** | **UGIT01** |
| **Course:** | **Python for AI** | | | **Course Code:** | **NUIT301** |

**Duration:** 1 Hour **Examination Pattern:** NEP-Autonomous-External **Max. Marks:** 30

**Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Draw neat diagrams wherever necessary.
4. CO (Course Outcome), KL (Knowledge Level).

**Examination:**

**REGULAR**

| Q. 1 | | **Attempt any THREE of the following.** | [15] | CO's | KL's |
|---|---|---|---|---|---|
| | (a) | Define function ? Create a user defined function to add and subtract value of two integers. | | CO1 | L1 |
| | (b) | List and explain types of operators in Python. | | CO2 | L1 |
| | (c) | Name any five built-in functions in Python also explain two of them. | | CO1 | L2 |
| | (d) | Write a Python program to find the largest of three numbers. | | CO4 | L3 |
| | (e) | Write a Python program that asks the user to enter a password repeatedly until the correct password ("python123") is entered. Display "Access Granted" when the correct password is entered. | | CO3 | L4 |
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| **Q. 2** | | **Attempt any THREE of the following.** | [15] | CO's | KL's |
| | (a) | Examine the following code and determine why it produces an incorrect result:<br>a = 10<br>b = 20<br>if a > b:<br>print("a is smaller") | | CO3 | L5 |
| | (b) | Write a Python program to accept a number from the user and print its multiplication table up to 10 using a for loop. | | CO4 | L4 |
| | (c) | Analyze and write key features of List. | | CO1 | L3 |
| | (d) | Consider the list: numbers = [10, 20, 30, 40, 50, 60, 70, 80]<br>Write the output of the following statements:<br>print(numbers[2])<br>print(numbers[-1])<br>print(numbers[1:5])<br>print(numbers[:4])<br>print(numbers[::2]) | | CO3 | L2 |
| | (e) | Explain the methods union(), intersection(), issubset(), issuperset(), and isdisjoint()methods used with sets . Give one example of each. | | CO2 | L2 |

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