CE/AM/CS/CYS/DS/EC/EEE/ME 125 (R-22)

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I/IV B. Tech. DEGREE EXAMINATIONS, AUGUST - 2024

Second Semester

CE/AM/CS/CYS/DS/EC/EEE/ME

PROGRAMMING IN PYTHON

Time : **Three Hours** Maximum : **70** Marks

Answer ONE Question from each Unit.

All Questions carry equal marks. 5x14=70 M

UNIT - I

1. a) Explain various Data types in Python programming.

   b) Demonstrate expression evaluation in Python programming.

(OR)

2. a) List out various operators available in Python and explain their precedence and Associativity.

   b) Write a python program to calculate the total amount to be paid by user after reducing the 10% discount on purchases more than 1000 rupees.

UNIT - II

3. a) Explain the syntax of different Nested Decision structures in Python programming.

   b) What is a conditional statement in Python programming ? Give the syntax of various conditional structures available in Python programming.

(OR)

4. a) Give the syntax of various Loop statements supported by Python programming.

   b) Write a Python program to construct the following pattern, using a nested for loop.

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P.T.O.

UNIT - III

5. a) What is a list in Python ? How to create nested lists ? Demonstrate how to create and print a 3-dimensional matrix with lists.

   b) Discuss various ways to create Tuples in Python and write a program to illustrate indexing and slicing.

(OR)

6. a) Write the properties of Dictionary Keys in Python. And explain how to access, delete and update Dictionary elements.

   b) Explain about Negative indexing and String functions in Python with a sample program.

UNIT - IV

7. a) What type of parameter passing is used in Python ? Justify your answer with sample programs.

   b) Write a recursive Python function that recursively computes sum of elements in a list of lists. Sample Input : [1, 2, [3, 4], [5, 6]] Expected Result : 21.

(OR)

8. a) What are the two ways of importing a module ? Which one is more beneficial ? Explain.

   b) How do you manipulate a file pointer in Python ? Explain with a sample program.

UNIT - V

9. a) What is the difference between else block and finally block in exception handling ? Explain with an example program.

   b) Demonstrate the use of Destructor with a Python program.

(OR)

10. a) Write about Class Inheritance and demonstrate the usage of issubclass() and isinstance() methods in Python.

    b) Write a Python program that overloads + operator, to add two objects of a class.