

23730

**M. Tech. 1st Semester (Artificial Intelligence and Data Science)
Examination – February, 2022**

PYTHON PROGRAMMING

Paper: 21MTA21C5

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after examination.

Note : Attempt five questions in all, selecting one question from each Unit. Question No. 1 is compulsory. All question carry equal marks.

- 1.** Write short note on the following : 5 × 4 = 20
- (a) Python Interpreter
 - (b) The pickle module
 - (c) Pandas
 - (d) CSV files

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UNIT - I

2. Describe history and origin of Python Language. Explain its features. Also describe modes of Python Interpreter. 20

3. Explain the following: 20

(i) Loops and Iteration

(ii) Lists in Python

UNIT - II

4. (i) Describe modules and types of Python Language. 10

(ii) Explain exception and exception handling in detail. 10

5. What is Numpy and why is it used in Python? 20

UNIT - III

6. Define Pandas. What are the data structures used in Pandas? 20

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7. (i) What are the different way to select or access data from a Data Frame? 10

(ii) Describe slicing and dicing a dataframe in Pandas. 10

UNIT - IV

8. (i) How do you redirect a Python script to a file? 10

(ii) How we create CSV file in Python? 10

9. (i) How do you do dot product and cross product in Python? 10

(ii) How do you use ODBC document in Python? 10

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