

Roll No.

23730

**M. Tech. 1st Semester (Artificial
Intelligence) & Data Science)
Examination – January, 2023**

PYTHON PROGRAMMING

Paper : 21MTAI21C5

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 Number 1 is compulsory. All questions carry equal marks.

1. Write short note on the following : 4 × 5 = 20
- (a) Python Lists
 - (b) Exception Handling
 - (c) Pandas
 - (d) My SQL

UNIT – I

2. (a) Describe the features of Python Language. 10
(b) What is the precedence of operators in Python ?

10

3. Explain the following : 2 × 10 = 20
(a) String & slicing in Python
(b) Mutable and Immutable types

UNIT – II

4. Define Python Package. How many packages are there in Python and what is its purpose ? Also explain different ways to import packages. 20
5. (a) What is Numpy module in Python ? 10
(b) How do you make a matrix array in Python ? 10

UNIT – III

6. (a) Define Pandas. Explain its advantages in detail. 10
(b) What is Data Manipulation in Pandas ? 10
7. (a) How do you clean up messy data in Python ? 10
(b) What are strings in Pandas ? 10

UNIT – IV

8. (a) How do you give permission to file in Python ? 10
(b) Describe different file modes in Python. 10
9. (a) How does Python connect to ODBC with SQL Server. 10
(b) What do you understand by vectorized functions ? Explain in detail. 10