Python for Data Science - Assignment

SRN: PES2UG22EC149

Course: Python for Data Science (NPTEL)

Assignment: 2 MCQs + 2 Descriptive Questions (Week 1 & 2)

MCQs (1 mark each)

Q1. In Python, which function is used to check the data type of a variable?

a) datatype()   b) type()   c) isinstance()   d) typeof()

Answer: b) type()

Q2. Which Pandas function is used to read a CSV file into a DataFrame?

a) pd.read_file()   b) pd.read_csv()   c) pd.load_csv()   d) pd.open_csv()

Answer: b) pd.read_csv()

Descriptive Questions (5–7 marks each)

Q3. Explain any four steps involved in data preprocessing using Pandas.

Answer:

1. Handling missing values (dropna, fillna).

2. Renaming or dropping columns.

3. Converting categorical variables into numerical (encoding).

4. Filtering and selecting subsets of data.

Q4. Differentiate between a Tuple and a Set in Python. Mention two key points for each.

Answer:

- Tuple:

  1. Ordered collection of elements.

  2. Immutable (cannot be modified after creation).

- Set:

  1. Unordered collection of unique elements.

  2. Mutable (can add or remove elements).