

Advanced Python Programming for AI and Machine Learning (Minor-6)**Time: 2:00 Hours****Marks:50****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1 Answer the following questions (Any Two) (10)
- 1) Explain Database Connectivity with Tkinter.
 - 2) Explain Reading data from CSV and Writing data into CSV files.
 - 3) Explain executing SQL queries for INSERT and DELETE operations with example.
 - 4) Explain Creating and connecting to SQLite databases.
- Que.2 Answer the following questions (Any Two) (10)
- 1) What is AI? Explain Core concept of AI.
 - 2) Explain Key features of AI.
 - 3) Explain Machine Learning Development Life Cycle.
 - 4) Explain categories of Machine Learning.
- Que.3 Answer the following questions Any Two (10)
- 1) What is a dataset? Explain importance in ML.
 - 2) Explain scatter plot with example.
 - 3) Explain numerical, categorical and ordinal types of data.
 - 4) Explain Exploratory data analysis basics.
- Que.4 Answer the following questions (Any Two) (10)
- 1) Explain Model optimization basics.
 - 2) Explain Spam email classification using Logistic Regression.
 - 3) Briefly explain Model training and testing techniques.
 - 4) Explain K-Means Clustering algorithm.
- Que.5 Answer the following questions (Any Two) (10)
- 1) Explain Displaying query results in Tkinter GUI components.
 - 2) Explain Real-world applications of AI.
 - 3) Explain histograms with example.
 - 4) Explain Simple Linear Regression algorithm.
