

**PRAGATI ENGINEERING COLLEGE: SURAMPALEM  
(AUTONOMOUS)**

**II B.Tech II Semester Regular Examinations, May -2024**

**PYTHON FOR DATA SCIENCE  
(for CSE Honors)**

Time: 3 hours

Max. Marks: 70

**Answer ONE Question from each Unit  
All Questions Carry Equal Marks**

Q. No.	Questions	BTL	CO	Marks
<b>UNIT – I</b>				
1.	a) Explain the steps involved in Exploratory Data Analysis.	K2	CO1	7M
	b) Write briefly about Boolean Indexing and Fancy Indexing with example.	K2	CO1	7M
<b>OR</b>				
2.	a) Demonstrate the roles and responsibilities of a data scientist.	K3	CO1	7M
	b) What are the various data types for ndarrays?	K2	CO1	7M
<b>UNIT – II</b>				
3.	a) List out the features of Pandas.	K2	CO2	7M
	b) Describe various descriptive and summary statistics. Explain with examples.	K2	CO2	7M
<b>OR</b>				
4.	a) Discuss some effective strategies for handling missing data in a dataset.	K3	CO2	7M
	b) Write about Indexing, Selecting and Filtering with Pandas.	K2	CO2	7M
<b>UNIT – III</b>				
5.	a) Explain how to read and write the data in text format with example code.	K2	CO3	7M
	b) What are the steps for storing and loading data in mongodb?	K2	CO3	7M
<b>OR</b>				
6.	a) Demonstrate interacting with SQLite database with an example program?	K3	CO3	7M
	b) Discuss about Delimited Formats and JSON Data with examples.	K3	CO3	7M
<b>UNIT – IV</b>				
7.	a) How to Combining Data in pandas with merge(), join(), and concat() methods?	K3	CO4	7M
	b) What are the different ways to remove duplicates and replace values?	K2	CO4	7M
<b>OR</b>				
8.	a) How to combine and merge Datasets. Explain with example.	K3	CO4	7M
	b) Explain about reshape a Pandas Data Frame using stack, unstack and melt methods.	K2	CO4	7M
<b>UNIT – V</b>				
9.	a) What are the functions useful for annotations and drawing on a Subplot?	K2	CO5	7M
	b) Compare Histograms Vs Density plots visualizations.	K3	CO5	7M
<b>OR</b>				
10.	a) Explain Plotting Functions in pandas with example..	K2	CO5	7M
	b) Demonstrate drawing of bar plots with the help of an example.	K3	CO5	7M