

R20

Course Code: 20DS3T01

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

**II B.Tech I Semester Supplementary Examinations, June - 2024**

**DATA SCIENCE THROUGH PYTHON  
(CSE-DS)**

**Max. Marks: 70**

**Time: 3 hours**

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

Q. No.	Questions	BTL	CO	Marks
<b>UNIT – I</b>				
1.	a) Discuss the Data Science Process.	K2	CO1	7M
	b) Explain about Exploratory Data Analysis.	K2	CO1	7M
<b>OR</b>				
2.	a) Explain Boolean indexing and Fancy indexing with example code.	K2	CO1	7M
	b) With an example program explain the functionality of Sorting function.	K1	CO1	7M
<b>UNIT – II</b>				
3.	a) Describe Pandas Library Architecture and Its Features.	K2	CO2	7M
	b) Define the following: i) Indexing ii) Selection	K1	CO2	7M
<b>OR</b>				
4.	a) List and describe the functions under Descriptive Statistics.	K2	CO2	7M
	b) Demonstrate Sorting and Ranking with example code.	K3	CO2	7M
<b>UNIT – III</b>				
5.	a) Explain the process of manually working with delimited formats.	K2	CO3	7M
	b) Explain in detail about Web Scraping.	K1	CO3	7M
<b>OR</b>				
6.	a) Discuss how to read Microsoft Excel files with an example program.	K2	CO3	7M
	b) Demonstrate how to interact with SQLite database with an example code.	K3	CO3	7M
<b>UNIT – IV</b>				
7.	a) Demonstrate Database-Style DataFrame joins with an example code.	K3	CO4	7M
	b) Explain about combining data with overlap indexes.	K2	CO4	7M
<b>OR</b>				
8.	a) Discuss how reshape and pivot operations are performed on DataFrame.	K2	CO4	7M
	b) Define Data Transformation and explain with an example code.	K2	CO4	7M
<b>UNIT – V</b>				
9.	a) Describe the methodology of matplotlib markers with example program.	K2	CO5	7M
	b) Define the following Matplotlib plot decorations: i) Ticks ii) Labels	K1	CO5	7M
<b>OR</b>				
10.	a) Describe Annotations and its drawing on a subplot.	K2	CO5	7M
	b) What is a scatter plot? For what type of data is scatter plot usually used.	K1	CO5	7M