

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-V(NEW) EXAMINATION – SUMMER 2022**

Subject Code:3150713

Date:02/06/2022

Subject Name:Python for Data Science

Time:02:30 PM TO 05:00 PM

Total Marks: 70

**Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
<b>Q.1</b>	(a) List Advantages of Python.	03
	(b) Differentiate Numpy and Pandas.	04
	(c) Explain Exploratory Data Analysis (EDA).	07
<b>Q.2</b>	(a) Explain String Slicing in python with Example.	03
	(b) List and Explain different programming styles in python.	04
	(c) Write a program to check whether the given number is prime or not.	07
<b>OR</b>		
	(c) Write a program to print Fibonacci series up to number given by user.	07
<b>Q.3</b>	(a) Differentiate rand and randn function in Numpy.	03
	(b) Explain DataFrame in Pandas with example.	04
	(c) Write a program to print following patterns.	07
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<b>OR</b>		
<b>Q.3</b>	(a) Explain Groupby function in pandas with example.	03
	(b) Explain how to deal with missing data in Pandas.	04
	(c) Explain Web Scrapping with Example using BeautifulSoup library.	07
<b>Q.4</b>	(a) Explain Bag of Word model.	03
	(b) Differentiate join and merge functions in pandas.	04
	(c) Write a program which takes 2 digits, X,Y as input and generates a 2-dimensional array of size X * Y. The element value in the i-th row and j-th column of the array should be i*j.	07

**OR**

- Q.4** (a) Explain Hashing Trick in python with example. **03**  
(b) Write a brief note on NetworkX library. **04**  
(c) List and Explain different graphs in Matplotlib. **07**

- Q.5** (a) Explain Labels, Annotation and Legends in Matplotlib. **03**  
(b) Differentiate Supervised and Unsupervised learning. **04**  
(c) Explain Regression with example. **07**

**OR**

- Q.5** (a) Write a program to print Current date and time. **03**  
(b) Write a program to interchange the List elements on two positions entered by a user **04**  
(c) Explain Classification with example. **07**

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