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
Q.1	**(a)**	List Advantages of Python.	**03**
	(b)	Differentiate Numpy and Pandas.	**04**
	(c)	Explain Exploratory Data Analysis (EDA).	**07**
Q.2	**(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**
		OR	
	(c)	Write a program to print Fibonacci series up to number given by user.	**07**
Q.3	**(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**

1)
```
*
* *
* * *
* * * *
```
2)
```
$ $ $ $
$ $ $
$ $
$
```
3)
```
# # # # #
 # # #
   #
 # # #
# # # #
```

OR

Q.3	**(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 Beautiful Soup library.	**07**
Q.4	**(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**

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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