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B.E. 5th (ATKT) EXAMINATION APRIL 2023

Subject Name : Data Science using Python Programming   **Subject Code: CS501-N**

Date: 05/04/2023(Wednesday)   Time: 10.00 am to 01.00 pm   **Total marks: 70**

Instructions:
1. Answer each section in separate Answer sheet.
2. All questions are compulsory.
3. Indicate clearly, the options you attempt along with its respective question number.
4. Use the last page of main supplementary for rough work.

Section-I

Q.1 (A)	Define CGI programming and filtering in python with its applications.	(5)
(B)	Explain the term Data Science with its applications in details.	(5)
(C)	Differentiate Supervised and Unsupervised learning.	(5)

OR

(C)	Write a Python function to find the Max of three numbers.	(5)

Q.2 (A)	What is Data manipulation and Data visualization? Explain with example.	(5)
(B)	Explain the stepwise installation of python.	(5)

OR

Q.2 (A)	For what purpose sampling is used. Demonstrate random sampling with example.	(5)
(B)	Write a Python program to load the iris data from a given csv file into a DataFrame and print the shape of the data, type of the data and first 3 rows.	(5)

Q.3 (A)	Explain the features of python.	(5)
(B)	Write a python program to removing punctuations, accent marks and other diacritics	(5)

OR

Q.3 (A)	Explain the advantages of python over the other programming languages.	(5)
(B)	What is the core competencies needed to become a data scientist? Explain in brief.	(5)

Section-II

Q.4 (A) Explain Basic Text Processing functions with example. (5)

(B) Explain lambda function and its usage in python. (5)

(C) Write a python program to print all prime numbers in given interval. (5)

OR

(C) Write a Python function to calculate the factorial of a number (a non-negative integer). (5)

Q.5 (A) Explain the recommendation system implementation in python. (5)

(B) Write a Python program to view basic statistical details like percentile, mean of iris data. (5)

OR

Q.5 (A) Explain popular tools is Data Science. (5)

(B) Explain the term Machine Learning. Explain its advantages and applications. (5)

Q.6 (A) Explain Scatter plot with appropriate example. (5)

(B) Write a python program to convert decimal number into binary using recursion. (5)

OR

Q.6 (A) Explain line plot with appropriate example. (5)

(B) Write a Python function that accepts a string and calculate the number of upper case letters and lower case letters. (5)