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Roll No.

TBC-401/TBI-401

**B. C. A./B. SC. (IT)
(FOURTH SEMESTER)**

MID SEMESTER

EXAMINATION, April, 2023

DATA ANALYTICS USING PYTHON

Time : 1½ Hours

Maximum Marks : 50

Note : (i) Answer all the questions by choosing any *one* of the sub-questions.

(ii) Each sub-question carries 10 marks.

1. (a) Define data analytics. Explain the types of data analytics. (CO1)

OR

- (b) What are the various stages in data analytics life cycle ? Illustrate with a figure, explaining each of them. (CO1)

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(2) . TBC-401/TBI-401

2. (a) A rowing team consists of four rowers who weigh 152, 156, 160, and 164 pounds. Find all Possible random samples with replacement of size two and compute the sample mean for each one. Use them to find the probability distribution, the mean, and the standard deviation of the sample mean \bar{X} . (CO2)

OR

- (b) What are the objectives of Multivariate Analysis ? Explain the various techniques of Multivariate analysis with example.

(CO2)

3. (a) (i) Discuss the Applications of Data Analytics.

(iii) Challenges of Conventional Systems.

(CO1)

OR

- (b) Explain Regression modelling. Find a linear regression equation for the following two sets of data : (CO2)

X	Y
2	3
4	7
6	5
8	10

(3)

4. (a) Explain the different sampling techniques with example. (CO2)

OR

- (b) Write short notes on the following : (CO2)

(i) Bayesian Modelling

(ii) Data and Types of Data

5. (a) What is Data Science ? Why is the Need for Data Science ? Explain the main subject areas of Data Science. (CO1)

OR

- (b) What is data Analysis ? Explain the various phases of data analysis process.

(CO1)