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**PRESIDENCY UNIVERSITY
BENGALURU**

**SCHOOL OF ENGINEERING
MID TERM EXAMINATION - MAY 2023**

Semester : Semester IV - B.Tech CSE - 2021

Course Code : CSE2027

Course Name : Sem IV - CSE2027 - Fundamentals of Data Analytics

Program : B.Tech. Computer Science and Engineering

Date : 22-MAY-2023

Time : 2.00 PM - 3.30 PM

Max Marks : 50

Weightage : 25%

Instructions:

- (i) Read all questions carefully and answer accordingly.
 - (ii) Question paper consists of 3 parts.
 - (iii) Scientific and non-programmable calculator are permitted.
 - (iv) Do not write any information on the question paper other than Roll Number.
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PART A

ANSWER ALL THE QUESTIONS

(5 X 2 = 10M)

1. Give any two examples of machine generated unstructured data.
(CO2) [Knowledge]
2. Explain veracity and validity with respect to Big data .
(CO1) [Knowledge]
3. Enumerate any two sources of data.
(CO2) [Knowledge]
4. Write the names of the four scales of data?
(CO1) [Knowledge]
5. Mention the difference between descriptive and inferential statistics
(CO2) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS

(4 X 5 = 20M)

6. A person plans to do Data Analysis on the given set of data. Discuss the steps the person has to follow to perform Data Analysis.

(CO1) [Comprehension]

7. An organisation is running into loss from past 3 quarters. Identify the type of analysis the organisation has to do in order to understand the reasons for the loss.

(CO1) [Comprehension]

8. The weekly price(in rupees) of an item in the store was observed and is as given: 48.4, 29.5, 17.2, 51.7, 83.1, 37.8. Find the fluctuation in the price of the item.

(CO2) [Comprehension]

9. A Data Analyst wants to do sampling to understand the given data by combining more than one sampling techniques. Discuss in detail the appropriate Sampling Technique applicable.

(CO2) [Comprehension]

PART C

ANSWER ALL THE QUESTIONS

(2 X 10 = 20M)

10. Diesel rate (per litre) were monitored every week for 5 weeks in USA and Vietnam in their respective currencies. Which country experiences the greater fuel price fluctuation?

USA	Vietnam
2.70	11612
3.06	12138
2.87	12980
2.69	13110
2.71	12084

(CO1) [Application]

11. Suppose a study of speeding violations and the drivers who used cell phones resulted in following virtual data:

	Speeding Violations	No Speeding Violations	Total
Cell Phone User	25	280	305
Not a cell phone user	45	405	450
Total	70	685	755

Find:

- Probability that a person is a cell phone user
- Probability that no violation in the last year AND the person was a cell phone user
- Probability that a person is a cell phone user given he had violation last year
- Probability that a person had no violation last year given he was not a cell phone user
- Probability that a person is a cell phone user OR person had no violations last year

(CO2) [Application]