

Reg. No.:

Name :



VIT[®]

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

Continuous Assessment Test II – June/July 2023

Programme	: B.Tech (ECE/ECM)	Semester	: FS 2022-23
Course	: Foundations of Data Analytics	Code	: BCSE351E
		Class Nbr	: CH2022232500353, CH2022232500351, CH2022232500359, CH2022232500360, CH2022232500356
Faculty	: Dr.G.Rohith, Dr.Kiruthika V., Dr.Sudhakaran G., Dr. Vijayarajan R., Dr. Sheena Christabel Pravin	Slot	: TE2
Time	: 90 Minutes	Max. Marks	: 50

Answer ALL the questions

Q.No.

Questions

Marks

Two features were considered to determine the performance of a candidate in an exam, viz. x_1 : {No. of hours of study}, x_2 : {No. of hours spent on media} as presented in **Table 1**.

1. Dimensionality reduction is recommended to facilitate quick grading of the candidates. Use a relevant feature reduction algorithm to achieve the same.

Table 1

[10]

x_1	2	3	4	5	6	7
x_2	1	5	3	6	7	8

Which measure of central tendency will you prefer in each of the following scenarios:

(i) A Team Leader wants to weigh the performance of one employee w.r.t. a group of employees. [2 marks]

(ii) An employee wants to know his performance over the evaluation period. [2 marks]

(iii) Another employee wants to know if he performs better or worse than a typical employee. [2 marks]

(iv) Compute central tendency measures for the data given in **Table 2** for each Employee and comment on their performance. [4 marks]

Table 2

2.

Employee ID	Time Management Score	Emotional Intelligence Score	Language Proficiency Score
1823	5	4	5
1824	3	4	2
1852	5	2	2
1859	2	2	3
1862	3	4	4

[10]



3. Crude oil prices in five consecutive years are presented in **Table 3**.

Table 3

Year (x)	2010	2011	2012	2013	2014	2015
Price in ₹ (y)	70	73	75	68	76	78

[10]

- Normalize Year values by $x_i - x_{\min}$ where i changes from 1 to 6 **[4 marks]**
- Find the least square regression line to represent the dataset **[4 marks]**
- Find Crude oil price y for the year 2017 **[2 marks]**

4.

Myntra is planning a marketing campaign meeting. Since the last meeting, the return on investment has gone up by 10.6% and the number of visitors to the website has gone up by 15.3%. The main goal of the last meeting was to work with the Marketing Director to improve engagement on social media channels, come up with a new strategy, and hire one sales manager and two new software developers. One developer has been hired, and the applications for the other two jobs are almost done.

The agenda for the meeting comprises of:

- Increase online store traffic by 33%
- Boost engagement on social by 42%.
- The Written scripts for new commercials and radio spots
- Designed graphics for digital ads and social media posts

[10]

Prepare a Minutes of Meeting (MoM) based on the above scenario to serve as a record of the meeting for those who were there and as a reference for those who were unable to attend.

5.

Generate a comprehensive case study report on Tesla's entry into the electric vehicle market and its disruptive impact on the automotive industry. **[4 marks]**

Explain the key steps involved in generating a case study report and outline the various sections that should be included with respect to the task. **[3 marks]**

[10]

Additionally, focus on analysing Tesla's business strategy, technological innovations, and the challenges faced during its journey to establish itself as a leading player in the market. **[3marks]**

