

Enroll No

K.E.Society's  
**Rajarambapu Institute of Technology, Rajaramnagar**  
 (An Empowered Autonomous Institute, affiliated to SUK)  
**Unit Test -II(2025-26)**  
 T. Y. B. Tech.-All Branch

Q.P. Code
UT 3121

**Course Code: OE343**

**Course Name: Data Science**

Day & Date: Friday 19/09/2025

Time: 10.30am to 11.30am

Max Marks- 25

- Instructions:**
- 1) All questions are compulsory.
  - 2) Figures in rounded ( ) brackets within the question, indicate the scheme of marking for respective part of the question, whereas, figures in the first right column indicate total marks for that whole question.
  - 3) CO is the index number of the Course Outcome statement.
  - 4) The Bloom's taxonomy level (BL) for 1,2,3,4,5 and 6 is remember, understand, apply, analyze, evaluate and create respectively.
  - 5) Assume suitable data if necessary.
  - 6) Use of non-programmable calculators is allowed

			Marks	BT Level	COs												
Q.1	A	Given the dataset: 8, 10, 12, 14, 15, 17, 18, 20, 22, 24,25, calculate the interquartile range (2 Marks), quartile deviation (2 Marks), and coefficient of quartile deviation (2 Marks).	06	3	CO2												
		OR															
	A	Explain the distinctions between variance and standard deviation, emphasizing their role in statistical analysis.	06	4	CO2												
	B	<table><tr><td>Class</td><td>5-15</td><td>15-25</td><td>25-35</td><td>35-45</td><td>45-55</td></tr><tr><td>Frequency</td><td>6</td><td>9</td><td>14</td><td>10</td><td>6</td></tr></table>	Class	5-15	15-25	25-35	35-45	45-55	Frequency	6	9	14	10	6	07	3	CO3
Class	5-15	15-25	25-35	35-45	45-55												
Frequency	6	9	14	10	6												
		Calculate the mean (2 Marks), median (2 Marks), and mode (2 Marks), Cumulative frequency (1 Marks) for this dataset.															
Q.2	A	Vectors are basic building blocks in R—explain their meaning (2 Marks), creation process (2 Marks), and provide two sample vectors (2 Marks)	06	2	CO4												
		OR.															
	A	Illustrate the creation of a 3-dimensional array in R (3 Marks), explaining the syntax and structure with an example of array (3 Marks).	06	4	CO4												
	B	Describe how the data.frame() function is used to construct data frames in R providing a suitable example. (4 Marks) and explain factors in R (2 Marks)	06	2	CO3												

