Name: _____ Enrolment no.: _____

Programme: _____

CSD102 Data Science Reading Course: End Semester Exam (Winter Sem.: 2024-25); Marks: 25 Marks, Computer Part Wt.: 10%

April 26, 2025, Saturday, 11.45 AM – 12.30 PM

Number of printed pages: 05

Instructions:

1 Figures to right indicate full marks.
2 Fill up details about your enrolment no and name on the question paper.
3 Write answers in the question paper itself and submit it before the end time.
4 This is a question paper of only the Statistics part.

Question 1. GreenEarth Grocery, a local organic store, has been tracking the number of customers visiting their shop on the first Monday of each month for 10 consecutive months. They are interested in understanding the distribution and central tendency of these visits to plan their inventory and staffing better.

Here is the recorded data (number of customer visits):

Number of visits:

85, 90, 92, 95, 95, 98, 100, 105, 110, 150

Questions:

1. Calculate the **mean**, **median**, and **mode** of the customer visits. What do these values suggest about the typical number of visitors? (6 marks)

2. Compute the **variance** and **standard deviation** of the dataset. Based on this, how consistent is the number of monthly visits? (7 marks)

3. Determine the **skewness** and **kurtosis** of the distribution. What can you infer about the shape of the distribution in terms of symmetry and peak? (7 marks)