Mymensingh Girls' Cadet College
2^{nd} Term Fornightly Examination - 2025
Subject: Statistics-I
Class: XI

Marks: 20 Time: 40 Minutes

[**N.B.** – The figures of the right margin indicate full marks. Read the stems carefully and answer the associated questions. Answer all the questions.]

1. **A software developer tracked the response times (in milliseconds) of a web application under test during peak usage hours. An unexpected delay of 1.2 ms was added to each recorded response time due to server lag. The recorded times are as follows:**

   45, 48, 52, 50, 47, 53, 60, 55, 58, 49

   (a) What is ordinal data? 1

   (b) Explain change of origin and scale with an example. 2

   (c) Calculate $\sum_{i=1}^{10}(X_i - k)^2$, where k is the last digit of your cadet number. 3

   (d) Find the sum of the original response times before the lag was added. 4

Short-Answer Questions

2. **Distinguish between the qualitative and quantitative variable.** $6 \times 0.5 = 3$

   Diameter of trees, Color, Weight, Gender, Jersey Number, Family Size

3. Give one example of each scale of measurement. 2

4. $x_1 = 2, x_2 = -3, x_3 = 7, x_4 = 12.$

   Find the values of the following: $2 \times 2 = 4$

   i) $(\sum_{i=1}^{3} x_i)^2$ ii) $\sum_{i=1}^{4} x_i^2$

5. Find $\sum_{i=1}^{5} c$, where c is a constant. 1

— AAM —