SYLHET CADET COLLEGE
SPECIAL EXAMINATION - 2024
CLASS: XI
SAQ and Creative QUESTIONS
STATISTICS
TIME – 01 hour
FULL MARKS – 30

Set	A

Subject Code: | 1 | 2 | 9 |

Candidates are asked not to leave any mark or spot on the question paper.

Short Questions

1. Expand $\sum_{i=1}^{n}(ax_i - b)$. 3

2. What is change of origin? Show an example. 2

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

   Find the values of the following: $2 \times 1.5 = 3$

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

4. **Write down the scales of measurement of the following variables.** $4 \times 0.5 = 2$

   Gender, Religion, Temperature, Income group (Lower class, Low, Middle, High)

Creative Questions

5. **A set of values and their respective frequencies are given below:**

x_i	2	4	8
f_i	5	4	6

   (a) Is X_i discrete? 1

   (b) Find $\sum_{i=1}^{2} f_i x_i$ 2

   (c) Estimate $\sum_{i=1}^{3} f_i x_i^2$ 3

   (d) Are $\sum_{i=1}^{3} f_i^2 x_i^2$ and $(\sum_{i=1}^{3} f_i x_i)^2$ equal? Verify. 4

6. $\sum_{i=1}^{m}\sum_{j=1}^{n}(x_i + y_j)$ is a notation making use of double summation.

   (a) What is $\sum_{i=1}^{n}(a)$, where a is a constant? 1

   (b) Why are two suffixes (i and j) used here? 2

   (c) Reduce the expression to single summations. 3

   (d) Evaluate the expression if X = 7, 10, 23 and Y = 10, 15, 16 4

An approximate answer to the right problem is worth a good deal more than an exact answer to an approximate problem. – John Tukey.