

SYLHET CADET COLLEGE

TEST EXAMINATION - 2024

CLASS: XII

STATISTICS (CREATIVE)

FIRST PAPER

TIME – 2 hours & 35 minutes

FULL MARKS – 50

Set	A
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Subject Code:	1	2	9
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[**N.B.** – The figures of the right margin indicate full marks. Read the stems carefully and answer the associated questions. Answer any **FIVE** questions taking at least two from each group.]

Group–A

1. Marks obtained by five studnets in statisics out of 15 were 4, 6, 10, 12, and 15. The examiner said, the square of the sum of the marks is greater than the sum of the squares of the marks.

- (a) What is finite population?1
- (b) Explain quantitative variable with an example.2
- (c) In the light of the available data, find $\sum_{i=1}^5 (x_i - 2x)^2$ 3
- (d) Verify the comment of the examiner.4

2. A system analyst collected frequencies of a signal at different times. Then he realized due to some unknown noise, 0.5 units got added to all the values. The recorded values are given below:

10, 12, 15, 14, 12, 16, 20, 16, 18, 11

- (a) What is change of origin?1
- (b) Does change of origin have an effect on median?2
- (c) Find $\sum_{i=1}^{10} (X_i - 5)$.3
- (d) Determine the summation of the values discarding the noise.4

3. A shrimp producer wanted to get an insight into his shrimp production. To do so, he randomly collected weights of different shrimps in his farm.

Weight of shrimp (gm)	10-20	20-30	30-40	40-50	50-60
Frequency	5	8	10	9	4

- (a) What is the primary goal of central tendency?1
- (b) When is Median a better measure of central tendency than Arithmetic Mean and why?2
- (c) From the stem, find 3rd quartile and explain.3
- (d) Find harmonic mean (HM) and compare with the arithmetic mean (AM)4

Group–B