

**Sylhet Cadet College**  
**Fortnightly Examination - 2023**  
**Class: XI**

**Subject: Statistics First Paper**

**Subject Code: 129**

**Time: 40 minutes**

**Full Marks: 20**

**Answer all the questions. Figures in the right indicate full marks.**

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

**Find the values of the following:**

$4 \times 1.5 = 6$

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

2. **Income and expenditure (both in thousands) of some individuals in four successive months are collected:**

Income (x)	20	30	25	10
Expenditure (y)	15	27	18	5

(a) What is a discrete variable? 1

(b) Can fractional numbers be discrete? Explain briefly. 2

(c) Are, in the stem,  $\sum_{i=1}^n \sum_{j=1}^n x_i y_j = \sum_{i=1}^n x_i y_i$ ? Show statistically. 3

(d) Prove empirically that sum of square is unequal to square of sum of numbers. 4

3. **Distinguish between the discrete and continuous variable.**

$8 \times 0.5 = 4$

Number of vote cast for a particular candidate, Time required to run 100 m, Years of schooling, Number of goals in a soccer match, Body temperature, Gravity of stars, Absolute humidity, Atomic Number