

Sylhet Cadet College
Fortnightly Examination - 2024
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.

1. Does Arithmetic Mean depend on change of origin and scale? Prove mathematically and with an example. 3
2. $Y_i = 3X_i$. If $G_y = 9, G_x = ?$ [G stands for Geometric Mean] 3
3. Find 1st and 3rd Quartiles and interpret: 2, 1, 0, 5, -6, 7, -4 3
4. For two distinct non-zero values, what is the relationship among AM, GM, and HM? 1
5. **Arithmetic (AM) and Harmonic Mean (HM) of two numbers are 25 and 9, respectively.**
 - (a) When is HM useful? 1
 - (b) Derive HM formula using the concept of average velocity. 2
 - (c) Find the two values from the stem. 3
 - (d) Show mathematically that $HM \leq AM$ (for n=2) 4

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