Sylhet Cadet College
Half-Yearly Examination - 2023
Class: XI
Subject: Statistics First Paper (MCQ) | Set: C |

Time: 20 minutes   **Subject Code: 129**   **Full Marks: 25**

Answer all the questions. Each question is worth one (1) mark.

1. **If $\sum_{i=1}^{20} x_i^2 = 20$ and $\sum_{i=1}^{20} x_i = 30$, what is the value of $\sum_{i=1}^{20} x_i^2 + \sum_{i=1}^{20} x_i + 100$?**
   (a) 130   (b) 200   (c) 150   (d) 2130

2. **A subset of a population is called–**
   (a) Constant   (b) Variable   (c) Sample   (d) Scale

3. $If x_1 = 2, x_2 = -3, x_3 = 7,$ **and** $x_4 = 12, \sum_{i=1}^{4} x_i^2 = ?$
   (a) 26   (b) 106   (c) 206   (d) 216

4. **Which one falls in the category of interval scale?**
   (a) Temperature   (b) Speed   (c) Distance   (d) Film rating

5. **Which is a discrete variable?**
   (a) Weight   (b) Amount of rainfall   (c) Distance   (d) Grade in a subject

6. **Which one is product of square?**
   (a) $\prod x_i^2$ (b) $(\prod x_i)^2$ (c) $\sum x_i^2 \times \sum x$ (d) $\sum x_i^2$

7. **How many measure of central tendency are there?**
   (a) 2   (b) 3   (c) 4   (d) 5

8. **Which measure of central tendency is suitable for qualitative variable?**
   (a) Arithmetic Mean   (b) Harmonic Mean   (c) Quadratic Mean   (d) Mode

   question **Inappropriate for algebraic analysis–**

   i. Median
   ii. Mode
   iii. Geometric Mean

   Which one is true?

   (a) i   (b) ii   (c) i & ii   (d) ii & iii

   Answer the next two questions based on the following information

Accident	4	6	7	8	9
Frequency	2	0	4	4	1

9. **Fifth Decile is –**
   (a) 0   (b) 8   (c) 7   (d) 6

10. **Which of the following is mode?**
    (a) 4   (b) 8   (c) 0   (d) 7

11. **In case of positive skewness, which one is correct?**
    (a) $Mean > Median > Mode$ (b) $Mean < Median < Mode$
    (c) $Mean = Median = Mode$ (d) $Mean > Median < Mode$

12. **The first raw moment about 3 is -5. What is the value of arithmetic mean?**
    (a) 2   (b) -2   (c) 0   (d) 8

13. **For a symmetrical distribution, $\beta_1 =$**
    (a) 1   (b) -1   (c) 0   (d) 3

14. **For a mesokurtik distribution, $\beta_2 = --$**
    (a) 0   (b) -3   (c) 3   (d) 1

15. **Moments can be–**

    i. positive
    ii. not negative
    iii. positive or negative

    Which one is correct?

    (a) i and ii   (b) i and iii   (c) ii and iii   (d) i, ii and iii

16. **First moment around a is equal to –**

    (a) 1   (b) 0   (c) -1   (d) $\bar{x} - a$

17. **Which measure is unit-free?**

    (a) Range   (b) Mean deviation   (c) Standard deviation   (d) Coefficient of variation

Answer Key

1. (c) 150

2. (c) Sample

3. (c) 206

4. (a) Temperature

5. (d) Grade in a subject

6. (a) $\prod x_i^2$

7. (d) 5

8. (d) Mode

8. (c) i & ii

9. (c) 7

10. (b) 8

11. (a) $Mean > Median > Mode$

12. (b) -2

13. (c) 0

14. (c) 3

15. (b) i and iii

16. (d) $\bar{x} - a$

17. (d) Coefficient of variation