Falcon

MYMENSINGH GIRLS' CADET COLLEGE
PRETEST EXAMINATION - 2025
CLASS: XII
MULTIPLE CHOICE QUESTIONS
STATISTICS
FIRST PAPER
[According to the Syllabus of 2026]
TIME – 25 minutes
FULL MARKS – 25

Subject Code: | 1 | **2** | 9 |

Set: **Ka**

[N.B. – Answer all the questions. Each question carries ONE mark. Block fully, with a black ball- point pen, the circle of the letter that stands for the correct/best answer in the "Answer sheet" for the Multiple Choice Questions Examination.]

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

1. **Which one represents an infinite population?**
   (a) Trees in a forest (b) Grains of sand on a beach
   (c) Books in a bookstore (d) Houses in a neighborhood

2. **Cities ranked according to habitability level show – measurement scale**
   (a) Nominal (b) Ratio (c) Interval (d) Ordinal

3. **If $x_1 = 4$, $x_2 = 1$, $x_3 = -2$, and $x_4 = 3$, find $\sum_{i=1}^{4}(x_i^2 + 3)$?**
   (a) 40 (b) 50 (c) 42 (d) 56

   Answer the next two questions based on the following information

   $$X = 20, 25, 30, 40$$

4. **Find $\sum(X_i + 10)$**
   (a) 150 (b) 155 (c) 125 (d) 250

5. $\sum(X_i - 30)^2$
   (a) 225 (b) 230 (c) 420 (d) 235

6. **Which measure is suitable for open-ended distribution?**
   (a) Median (b) Mode (c) Geometric Mean (d) Arithmetic mean

7. **Which relationship is correct?**
   (a) $AM \times GM = HM^2$ (b) $AM \times HM = GM^2$ (c) $AM \times HM = GM^3$ (d) $AM \div GM = HM^2$

8. **If $\sum(x_i - k) = 0$, what is the value of k?**
   (a) n (b) $\bar{x}$ (c) x (d) $n\bar{x}$

9. **Which of the following may be used to determine mode?**
   (a) Histogram (b) Frequency Curve (c) Ogive (d) Frequency Polygon

10. **A good measure of central tendency -**
    i. is loosly defined
    ii. takes into consideration all values
    iii. easily understandable

    Which one is correct?
    (a) i and ii (b) i and iii (c) ii and iii (d) i, ii and iii

    Answer the next two questions based on the following information.

    The temperatures (in ^oC) of two cities in a country are 30 and 35.

11. **What is their Mean deviation?**
    (a) 1.2 (b) 2.5 (c) 3.0 (d) 5.5

12. **What is the coefficient of variation?**

(a) 2.7% (b) 8.3% (c) 5.8% (d) 7.7%

13. **Standard deviation —**

i. depends on all values
ii. is not affected by outliers
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Which one is correct?

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

14. **The moments around the origin are called –**

(a) Central moments (b) Raw moments (c) First raw moment (d) Measures of dispersion

15. **The Range of Karl Pearson's measure of skewness –**

(a) (0, 1) (b) (-1, 1) (c) (-3, 3) (d) (0, ∞)

16. **Which quantity uniquely characterizes a distribution?**

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Which one is correct?

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17. **Which moment is equal to zero?**

(a) First raw moment around 1 (b) FIRST central moment
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18. **Which might have a negative value?**

(a) μ_4 (b) μ_3 (c) μ_2' (d) μ_2

19. **The first raw moment about 3 is -5. What is the value of arithmetic mean?**

(a) 2 (b) -2 (c) 0 (d) 8

20. **Two variables having changes in same direction at different rates display —**

(a) Perfect negative correlation (b) Partial positive correlation
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21. **The lowest possible value of the correlation coefficient —**

(a) 1 (b) 0 (c) $-\infty$ (d) -1

22. **Which of the following coefficients indicates strong negative correlation?**

(a) -0.5 (b) -2 (c) 0.67 (d) -0.94

Answer the next two questions based on the following information

Commodity wise export shipments (In million US$) of Frozen and live fish in Bangladesh are given below.

Months	2022-23 (July-Dec)	2023-24 (Jan-Jun)	2022-23 (July-Dec)
Amount	246.38	175.19	215.13

23. **Which component of time series is most evident?**

(a) Irregular variation (b) Cyclic variation (c) Trend (d) Seasonal variation

24. **Which value is most probable in the next period?**

(a) 200 (b) 190 (c) 130 (d) 220

25. **A company is constantly getting greater revenue than previous year; this is–**

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TIME – 25 minutes
FULL MARKS – 25

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Set: **Kha**

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1. **Which measure is suitable for open-ended distribution?**
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