

[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. Cities ranked according to habitability level show – measurement scale
- (a) Nominal (b) Ratio (c) Interval (d) Ordinal
2. 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
3. Classifying students based on their grades (A, B, C, etc.) represents which measurement scale?
- (a) Nominal (b) Ordinal (c) Interval (d) Ratio
4. If $x_1 = 4$, $x_2 = -2$, $x_3 = 1$, and $x_4 = 5$, calculate $\sum_{i=1}^4 (2x_i^2 - x_i)$?
- (a) 38 (b) 42 (c) 46 (d) 84

Answer the next two questions based on the following information

$$X = 6, 8, 10, 12$$

5. Find $\sum (X_i - 4)$
- (a) 20 (b) 30 (c) 32 (d) 22
6. $\sum (X_i + 2)^2$
- (a) 196 (b) 504 (c) 210 (d) 220
7. Data obtained through direct observation is called–
- (a) Primary data (b) Secondary data (c) Original Data (d) Informal data
8. Which formula is used to find angles for Pie Chart?
- (a) $\theta_i = \frac{f_i}{N} \times 100$ (b) $\theta_i = \frac{f_i}{100} \times 360$ (c) $\theta_i = \frac{f_i}{N} \times 360$ (d) $\theta_i = \frac{f_i}{N-1} \times 360$
9. Which rule is suggested by H.G. Sturges for determining number of class (k)?
- (a) $K = 1 + 3.322\log N$ (b) $K = 1 + 3.222\log N$ (c) $K = 1 - 3.222\log N$ (d) $K = 1 + 2.332\log N$

Answer the next THREE questions based on the following information

Radius of 80 trees are recorded and this frequency distribution is constructed.

Radius (cm)	0-10	10-20	20-30	30-40
No. of Trees	20	15	21	24

10. How many trees have radius between 10 and 30?
- (a) 30 (b) 15 (c) 36 (d) 21
11. How many trees have radius at least 20?
- (a) 44 (b) 45 (c) 24 (d) 21
12. What percent of trees have radius between 20 and 40?
- (a) 44% (b) 56% (c) 46% (d) 53%

13. **How many sources of data are there?**
(a) 5 (b) 4 (c) 3 (d) 2
14. **Which one is true of primary data?**
i. Original
ii. Suitable
iii. Reliable
Which one is correct?
(a) i and ii (b) i and iii (c) ii and iii (d) i, ii and iii
15. **Which is not a measure of central tendency?**
(a) Arithmetic mean (b) Mode (c) Range (d) Quadratic mean
16. **Which measure of central tendency is suitable for qualitative/categorical variable?**
(a) Arithmetic Mean (b) Harmonic Mean (c) Quadratic Mean (d) Mode
17. **Which relationship is correct?**
(a) $AM \times GM = HM^2$ (b) $AM \times HM = GM^2$ (c) $AM \times HM = GM^3$ (d) $AM \div GM = HM^2$
18. **Arithmetic Mean of first 25 natural numbers is –**
(a) 12 (b) 13 (c) 14 (d) 26
19. **With negative observations, which cannot be used**
i. Arithmetic Mean
ii. Geometric Mean
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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
- Answer the next three questions as per the following information.**

42 44 59 64 70 72 74 91 94 are 9 values.

20. **What is the median?**
(a) 64 (b) 70 (c) 72 (d) 71
21. **What is the first quartile?**
(a) 42.4 (b) 44.7 (c) 51.5 (d) 64.2
22. **Above which value lie 60% observations?**
(a) 70.4 (b) 72.0 (c) 74.6 (d) 66.4
23. **What is the variance of a constant c?**
(a) 1 (b) 0 (c) -1 (d) ∞
24. **What is the correct formula for the variance of a sample?**
(a) $\frac{\sum x_i^2}{n} - \frac{\bar{x}}{n}$ (b) $\frac{\sum x_i^2}{n} - \left(\frac{\sum x_i}{n}\right)^2$ (c) $\sum x^2$ (d) $\sum 2^x$
25. **Which set of data looks more scattered?**
(a) -1, 1, 2 (b) -5, 6, 7 (c) -10, 10, 30 (d) 5,8,20

“It is easy to lie with statistics; it is easier to lie without them.”
- Frederick Mosteller

MYMENSINGH GIRLS’ CADET COLLEGE
THIRD TERM-END EXAMINATION - 2025
CLASS: XI
MULTIPLE CHOICE QUESTIONS
STATISTICS
FIRST PAPER
[According to the Syllabus of 2027]
TIME – 25 minutes
FULL MARKS – 25

Subject Code:

1	2	9
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Set:

Kha

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

1. Data obtained through direct observation is called–
(a) Primary data (b) Secondary data (c) Original Data (d) Informal data
2. Which formula is used to find angles for Pie Chart?
(a) $\theta_i = \frac{f_i}{N} \times 100$ (b) $\theta_i = \frac{f_i}{100} \times 360$ (c) $\theta_i = \frac{f_i}{N} \times 360$ (d) $\theta_i = \frac{f_i}{N-1} \times 360$
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9. Cities ranked according to habitability level show – measurement scale
(a) Nominal (b) Ratio (c) Interval (d) Ordinal

10. Which one represents an infinite population?
(a) Trees in a forest (b) Grains of sand on a beach
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11. Classifying students based on their grades (A, B, C, etc.) represents which measurement scale?
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12. If $x_1 = 4$, $x_2 = -2$, $x_3 = 1$, and $x_4 = 5$, calculate $\sum_{i=1}^4 (2x_i^2 - x_i)$?
- (a) 38 (b) 42 (c) 46 (d) 84
- Answer the next two questions based on the following information
- $$X = 6, 8, 10, 12$$
13. Find $\sum (X_i - 4)$
- (a) 20 (b) 30 (c) 32 (d) 22
14. $\sum (X_i + 2)^2$
- (a) 196 (b) 504 (c) 210 (d) 220
15. Which is not a measure of central tendency?
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16. Which measure of central tendency is suitable for qualitative/categorical variable?
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18. Arithmetic Mean of first 25 natural numbers is –
- (a) 12 (b) 13 (c) 14 (d) 26
19. With negative observations, which cannot be used
- i. Arithmetic Mean
ii. Geometric Mean
iii. Harmonic Mean

Which one is correct?

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

Answer the next three questions as per the following information.

42 44 59 64 70 72 74 91 94 are 9 values.

20. What is the median?
- (a) 64 (b) 70 (c) 72 (d) 71
21. What is the first quartile?
- (a) 42.4 (b) 44.7 (c) 51.5 (d) 64.2
22. Above which value lie 60% observations?
- (a) 70.4 (b) 72.0 (c) 74.6 (d) 66.4
23. What is the variance of a constant c?
- (a) 1 (b) 0 (c) -1 (d) ∞
24. What is the correct formula for the variance of a sample?
- (a) $\frac{\sum x_i^2}{n} - \frac{\bar{x}}{n}$ (b) $\frac{\sum x_i^2}{n} - \left(\frac{\sum x_i}{n}\right)^2$ (c) $\sum x^2$ (d) $\sum 2^x$
25. Which set of data looks more scattered?
- (a) -1, 1, 2 (b) -5, 6, 7 (c) -10, 10, 30 (d) 5,8,20

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- (a) 12

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5. With negative observations, which cannot be used
- i. Arithmetic Mean

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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
- Answer the next three questions as per the following information.

42 44 59 64 70 72 74 91 94 are 9 values.

6. What is the median?
- (a) 64

(b) 70

(c) 72

(d) 71
7. What is the first quartile?
- (a) 42.4

(b) 44.7

(c) 51.5

(d) 64.2
8. Above which value lie 60% observations?
- (a) 70.4

(b) 72.0

(c) 74.6

(d) 66.4
9. Cities ranked according to habitability level show – measurement scale
- (a) Nominal

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