

SYLHET CADET COLLEGE

PROGRESS TEST EXAMINATION - 2024

CLASS: XI

MULTIPLE CHOICE QUESTIONS

STATISTICS FIRST PAPER

TIME – 25 minutes

FULL MARKS – 25

Set	A
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Subject Code:

1	2	9
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[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. A researcher collected data on age and income of the people in a city. The variables are –
- i. bi-variate
 - ii. quantitative
 - iii. qualitative

Which one is correct?

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

2. Which measurement scale does height belong to?

- (a) Nominal (b) Ordinal (c) Interval (d) Ratio

3. The arithmetic mean of first 10 natural numbers is:

- (a) 6 (b) 8.5 (c) 5.5 (d) 5.6

4. If a data set is divided into five parts, how many partition values are created?

- (a) 4 (b) 5 (c) 6 (d) 3

5. When is the statement $AM = GM = HM$ true?

- (a) When the values are natural numbers (b) When all the values are equal
(c) When all the values have equal frequency (d) When mode is greater than median

6. Which is considered statistics?

- (a) Jaman obtain 75 in statistics (b) Shafiq lives at Road no. 5
(c) Mean monthly income in a city is 60,000 taka (d) Width of a book is 10 cm

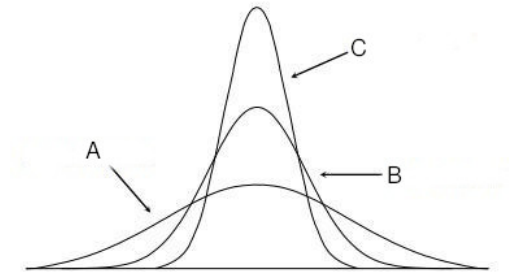
7. If $\gamma_1 > 0$, the data is -

- (a) Negatively skewed (b) Positively skewed (c) Symmetric (d) Uncertain

8. Which relationship is correct?

- (a) $M_o = 2Me - \bar{x}$ (b) $M_o = 3Me - \bar{x}$ (c) $M_o = 3Me - 2\bar{x}$ (d) $M_o = 2Me - 3\bar{x}$

9. Which curve is platykurtic?



- (a) A (b) B (c) C (d) None

10. What is formula of the left inner fence for a box and whisker plot?

- (a) $Q_1 - 1.5 \times IQR$ (b) $Q_3 + 1.5 \times IQR$ (c) $Q_1 - 3 \times IQR$ (d) $Q_3 + 1.5 \times IQR$

11. If $x_1 = 2, x_2 = 3, x_3 = 4, x_4 = 6$, and $x_5 = 5, \sum_{i=1}^4 x_i^2 = ?$

- (a) 80 (b) 87 (c) 90 (d) 105

12. Which can be measured from the Ogive?

- (a) Arithmetic Mean (b) Geometric Mean (c) Median (d) Mode

Answer the next three questions based on the following information

The data collected in a research is this: 1, 2, 4, 8, 16, 32

13. Which measure is suitable?

- (a) Arithmetic Mean (b) Geometric Mean (c) Median (d) Mode

14. What is the arithmetic mean of the data?

- (a) 8.5 (b) 10 (c) 8 (d) 10.5

15. What is the geometric mean?

- (a) 8.5 (b) 5.66 (c) 6.55 (d) 16

16. The arithmetic mean and geometric mean of two non-zero positive numbers are 15 and 10, respectively. What is harmonic mean?

- (a) 6.61 (b) 6.67 (c) 7.66 (d) 6.76

17. A good measure of central tendency -

- i. is loosely 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

18. What is the harmonic mean of these values: 10, 12, 13, 15, 20, 25

- (a) 12.49 (b) 14.93 (c) 14.39 (d) 13.49

19. What is true of harmonic mean?

- i. uses all values in the data
- ii. undefined if the any value is zero
- iii. affected by extreme values

Which one is correct?

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

20. What is formula of rth raw moment for grouped data about a?

- (a) $\frac{\sum f_i(x_i-a)^r}{n}$ (b) $\frac{\sum f_i(x_i-\bar{x})^r}{n}$ (c) $\frac{\sum (x_i-a)^r}{n}$ (d) $\frac{\sum (x_i+a)^r}{n}$

21. Which relationship is correct?

- (a) $\mu'_1 = \bar{x} + a$ (b) $\mu'_1 = \bar{x} - a$ (c) $\mu'_2 = \bar{x} + a$ (d) $\mu_1 = \bar{x} - a$

22. Which is not a time series data?

- (a) Number of calls received per week (b) No. of road accidents on different days
(c) No. of earthquakes in different regions (d) No. of particles decayed in each second

23. Which is a type of trend?

- i. Linear trend
- ii. Non-linear trend
- iii. Cyclic trend

Which one is correct?

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

24. Which can measure trend most precisely?

- (a) Graphical method (b) Semi-average method (c) Moving average method (d) Quarter-average method

25. Which statistics are published by the WHO?

- (a) Official statistics (b) Non-official statistics (c) Semi-official statistics (d) None of the above

Figures don't lie, but liars figure. - Mark Twain

Answer Key

1. (a) i and ii

2. (d) Ratio

3. (c) 5.5

4. (a) 4

5. (a) When the values are natural numbers

6. (c) Mean monthly income in a city is 50,000.66

7. (b) Positively skewed

8. (a) $M_o = 2Me - \bar{x}$

9. (a) A
10. (a) $Q_1 - 1.5 \times IQR$

11. (c) 90

12. (c) Median

13. (b) Geometric Mean

14. (d) 10.5

15. (b) 6.67

16. (b) 6.67

17. (c) ii and iii

18. (c) 14.39
19. (a) i and ii

20. (a) $\frac{\sum f_i(x_i-a)^r}{n}$

21. (b) $\mu'_1 = \bar{x} - a$

22. (c) No. of earthquakes in different regions

23. (a) i and ii

24. (c) Moving average method

25. (c) Semi-official statistics