

Sylhet Cadet College
Pre-Test Examination - 2022
Class: XII
Set - C

Subject: Statistics First Paper (MCQ)
Subject Code: 129

Time: 25 minutes

Full Marks: 25

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

1. Which measure of central tendency is suitable for qualitative variable?
(a) Arithmetic Mean (b) Harmonic Mean (c) Quadratic Mean (d) Mode
2. In presence of negative values, which measure is not usable?
(a) Arithmetic Mean (b) Geometric Mean (c) Quadratic Mean (d) Harmonic Mean
3. What is the arithmetic mean of first n odd natural numbers?
(a) $\frac{n+1}{n}$ (b) n (c) $n+1$ (d) $\frac{n+1}{2}$
4. Which measure is not used in determining skewness?
(a) Arithmetic Mean (b) Geometric Mean (c) Median (d) Mode
5. 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

6. Fifth Decile is –
(a) 0 (b) 8 (c) 7 (d) 6
7. Which of the following is mode?
(a) 4 (b) 8 (c) 0 (d) 7
8. Which measure gives a value from within the values?
(a) Arithmetic Mean (b) Geometric Mean (c) Median (d) Mode
9. Which one is not a proper measure of central tendency?
(a) 2nd Quartile (b) Third Decile (c) 3rd Quintile (d) 110th Percentile
10. Which can be used to measure dispersion?
(a) μ'_2 (b) μ_1 (c) μ_2 (d) μ'_1
11. The formula of coefficient of variance (CV) is –
(a) $\frac{\mu_2}{n} \times 100$ (b) $\frac{\mu_2}{\mu_1} \times 100$ (c) $\frac{\mu_2}{\bar{x}} \times 100$ (d) $\frac{\mu_3}{\sigma} \times 100$
12. First moment around zero is –
(a) 0 (b) 1 (c) -1 (d) Arithmetic Mean

13. Which values are used in constructing Box & Whisker Plot?
 (a) Mode (b) X_L (c) Q_1 & Q_3 (d) Q_1, Q_2 & Q_3
14. Which might have a negative value?
 (a) μ_4 (b) μ_3 (c) μ'_2 (d) μ_2
15. In a symmetric distribution—
 i. Arithmetic Mean = Mode = Median
 ii. $Q_2 - Q_1 = Q_3 - Q_2$
 iii. $Q_1 - X_H = X_H - Q_3$
 Which one is true?
 (a) i & ii (b) ii & iii (c) i & iii (d) i, ii & iii
16. For a data, $Q_3 = 41.6, Q_1 = 17.2, \text{Median} = 29, \&AM = 30$; What is Coefficient of skewness?
 (a) 24.4 (b) 1 (c) 0.03 (d) 29.45
17. $\sqrt{\beta_1} = -0.23$ implies—
 (a) Left Skew (b) Symmetry (c) Right Skew (d) Mesokurtic
18. Which is not included in five number summary?
 (a) Arithmetic Mean (b) X_H (c) Q_2 (d) Q_3
19. $\beta_2 = \sqrt{9}$ implies data are—
 (a) Leptokurtic (b) Platykurtic (c) Mesokurtic (d) Symmetric
20. 2nd Central Moment is —
 (a) $\mu_2 - \mu'_1$ (b) $\mu_2 + \mu'_1$ (c) $\mu_2 - \mu'^2_1$ (d) $\mu'_2 - \mu^2_1$
21. A company is constantly getting greater revenue than previous year; this is—
 (a) Seasonal Variation (b) General Trend (c) Irregular Variation (d) Cyclic Variation
22. Which is not a method of finding general trend?
 (a) Graphical Method (b) Moving Average (c) Semi-Average (d) Moving Median

Answer the next two questions based on the following table:

Year	2007	2008	2009	2010	2011	2012
Sales	5	35	34	40	42	204

23. In Semi-Average method, what is the 2nd average?
 (a) 74 (b) 24.67 (c) 95.33 (d) 28
24. For this data, which method would give the best measure of trend?
 (a) 3-yearly Moving Average (b) 4-yearly Moving Average
 (c) Semi-Average (d) Graphical Method
25. which component of time series represents a natural disaster?
 (a) Seasonal Variation (b) General Trend (c) Irregular Variation (d) Cyclic Variation

Answer Key: (Correction required)

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|-------------------------|--|---------------------------------|
| 1. (d) Mode | 10. (c) μ_2 | 18. (a) Arithmetic Mean |
| 2. (b) Geometric Mean | 11. (c) $\frac{\mu_2}{\bar{x}} \times 100$ | 19. (c) Mesokurtic |
| 3. (b) n | 12. (a) 0 | 20. (c) $\mu_2 - \mu_1'^2$ |
| 4. (b) Geometric Mean | 13. (a) Mode | 21. (b) General Trend |
| 5. (a) i | 14. (b) μ_3 | 22. (d) Moving Median |
| 6. (c) 7 | 15. (d) i, ii & iii | 23. (c) 95.33 |
| 7. (b) 8 | 16. (d) 29.45 | 24. (a) 3-yearly Moving Average |
| 8. (d) Mode | 17. (a) Left Skew | 25. (c) Irregular Variation |
| 9. (d) 110th Percentile | | |