Sylhet Cadet College

Pre-Test Examination - 2022
Class: XII
Set - C
Subject: Statistics First Paper (MCQ)

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

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

1. **Which measure of central tendencyis 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 symmatric 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,** $Q_3 = 41.6, Q_1 = 17.2, Median = 29, \& AM = 30$**; 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) $\mu_2 - \mu_1'^2$ (d) $\mu_2' - \mu_1^2$

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

1 Moments, Skewness, and Kurtosis

26. **Which can be used to measure dispersion?**
    (a) μ_2' (b) μ_1 (c) μ_2 (d) μ_1'

27. **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) $\frac{\mu_3}{\sigma} \times 100$

28. **First moment around zero is –**
    (a) 0 (b) 1 (c) -1 (d) Arithmetic Mean

29. **Which values are used in constructing Box & Whisker Plot?**
    (a) Mode (b) X_L (c) $Q_1 \& Q_3$ (d) $Q_1, Q_2 \& Q_3$

30. **Which might have a negative value?**
    (a) μ_4 (b) μ_3 (c) μ_2' (d) μ_2

31. **In a symmatric 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

32. **For a data,** $Q_3 = 41.6, Q_1 = 17.2, Median = 29, \& AM = 30$**; What is Coefficient of skewness?**
    (a) 24.4 (b) 1 (c) 0.03 (d) 29.45

33. $\sqrt{\beta_1} = -0.23$ **implies–**
    (a) Left Skew (b) Symmetry (c) Right Skew (d) Mesokurtic

34. **Which is not included in five number summary?**
    (a) Arithmetic Mean (b) X_H (c) Q_2 (d) Q_3

35. $\beta_2 = \sqrt{9}$ **implies data are–**
    (a) Leptokurtic (b) Platykurtic (c) Mesokurtic (d) Symmetric

36. **2nd Central Moment is –**
    (a) $\mu_2 - \mu_1'$ (b) $\mu_2 + \mu_1'$ (c) $\mu_2 - \mu_1'^2$ (d) $\mu_2' - \mu_1^2$