1189/BS1   OCTOBER 2010

BASIC BIOSTATISTICS

Time : Three hours   Maximum : 100 marks

SECTION A — (20 × 1 = 20 marks)

Answer ALL questions.

Choose the correct answer :

1. Health statistics was introduced by ——————
   - (a) Karl Pearson
   - (b) John Graunt
   - (c) Fischer
   - (d) Robert

2. A small representative fraction of a population is called as ——————
   - (a) Unit
   - (b) Variable
   - (c) Sample
   - (d) Data

3. Primary data are ——————
   - (a) Always reliable
   - (b) Less reliable
   - (c) Depends on the care with which data have been collected
   - (d) Not reliable

4. —————————— is the middle value of a class
   - (a) Median
   - (b) Mean
   - (c) Class interval
   - (d) Class limit

5. Histogram is a ——————
   - (a) Diagram
   - (b) Circle
   - (c) Graph
   - (d) Line

6. What is Ogive?
   - (a) Frequency table
   - (b) Frequency polygon
   - (c) Cumulative frequency curve
   - (d) Bar chart

7. In component bar diagram largest component is mentioned at the ——————
   - (a) Top
   - (b) Bottom
   - (c) Middle
   - (d) Top and Bottom

8. What is caption?
   - (a) Headings of vertical columns
   - (b) Headings of horizontal columns
   - (c) Title of a table
   - (d) Sources of information

9. A series of values of a variable over a period of time arranged chronologically is called as _____

   (a) Continuous series

   (b) Discontinuous series

   (c) Time series

   (d) Long series

10. The general nature of the movement observed in the data over a long period of time is referred to as _____

    (a) secular trend

    (b) cyclic trend

    (c) periodic trend

    (d) seasonal trend

11. Which of the following is a position average?

    (a) Mode   (b) Harmonic mean

    (c) Geometric mean   (d) Median

12. What is the median value for 5, 11, 6, 10, 14, 21?

    (a) 8.5   (b) 9.5

    (c) 10.5   (d) 11.5

13. Half of the difference between third quartile and first quartile is called as _____

    (a) mean deviation

    (b) inter quartile deviation

    (c) semi quartile deviation

    (d) quartile deviation

14. 50th percentile is called as _____

    (a) average   (b) mean

    (c) mode   (d) median

15. What is co-efficient of range?

    (a) $\dfrac{L-S}{L+S}$ (b) $\dfrac{L+S}{L-S}$

    (c) $(L-S)\times(L+S)$ (d) $\dfrac{(L-S)(L+S)}{2}$

16. What is variance?

    (a) Square root of standard deviation

    (b) Square of standard deviation

    (c) Square root of mean deviation

    (d) Square of mean deviation

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17. Rank correlation coefficient was developed by _____

    (a) Bowley   (b) Spearman

    (c) Fischer   (d) Blair

18. Theoretically the values of coefficient of correlation shall always between _____

    (a) +1 and –1   (b) +2 and –2

    (c) +3 and –3   (d) +5 and –5

19. The term regression was first introduced by _____

    (a) Kelly   (b) Fischer

    (c) Galton   (d) Bayer

20. If both the regression coefficients are negative, the correlation wound be _____

    (a) Negative   (b) Positive

    (c) Neutral   (d) Zero

SECTION B — (5 × 6 = 30 marks)

Answer ALL questions by choosing either 'a' or 'b'.

21. (a) What is the scope of statistics in medical field?

        Or

    (b) What are the advantages of frequency distribution table?

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22. (a) Write differences between histogram and bar chart.

        Or

    (b) What is pie diagram?

23. (a) Mention any two diagrams used in Time comparison.

        Or

    (b) Differentiate between mean and median.

24. (a) Calculate the 25th percentile for the given data.

Protein consumption in Milligrams :	15-25	25-35	35-45	45-55
Number of children :		30	40	100	110

Protein consumption in Milligrams :	55-65	65-75	75-85
Number of children :	–	30	10

        Or

    (b) Calculate the mean deviation for the given data.

        7, 4, 10, 9, 15, 12, 7, 9, 7.

25. (a) Write the various types of correlation.

        Or

    (b) Mention the importance of regression analysis.

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