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F.Y. B.Sc. (Computer Science)
STATISTICS
CSST-111 : Descriptive Statistics - I
(2019 Pattern) (Semester - I) (Paper - I)

Time : 2 Hours]   *[Max. Marks : 35*

Instructions to the candidates:

1) *All questions are compulsory.*

2) *Figures to the right indicate full marks.*

3) *Use of calculator and statistical tables is allowed.*

4) *Symbols and abbreviations have their usual meaning.*

Q1) Choose the most appropriate alternative for each of the following :   **[4]**

    i)   If the classes are 0 - 2, 2 - 4, 4 - 6, 6 - 8, 8 - 10. Then the class width is

        a)   4   b)   10

        c)   2   d)   5

    ii)   The number of quartiles are

        a)   4   b)   10

        c)   100   d)   3

    iii) Mode can be obtained graphically by using

        a)   histogram

        b)   less than type cumulative frequency curve

        c)   more than type cumulative frequency curve

        d)   ogive curves

    iv) If $(Q3 - Q2) > (Q2 - Q1)$, then the distribution is

        a)   symmetric   b)   positively skewed

        c)   negatively skewed   d)   leptokurtic

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Q2) Attempt any FIVE of the following :   [5 × 2 = 10]

   i)   Define the terms :

      a)   Attribute   b)   Variable

   ii) Construct stem and leaf plot for the following data :

      15, 22, 12, 34, 28, 45. 31, 22. 26, 21

   iii) Define less than type cumulative frequency.

   iv) The mean monthly salary of 100 male employees is Rs. 20,000/-. The mean monthly salary of 50 female employees is Rs. 22,000/-. Find mean monthly salary of all the employees taken together.

   v) Examine whether the following data is consistent or not?

      N = 200, (A) = 150, (B) = 80, (AB) = 25

   vi) Express the second and third central moment in terms of raw moments.

   vii) State the relation between mean, median and mode for

      a)   symmetric distribution

      b)   positively skewed distribution

   viii) What is dispersion. State different measures of dispersion?

Q3) Attempt any TWO of the following :   [2 × 4 = 8]

   i)   Explain inclusive and exclusive methods of classification.

   ii) Write a note on Box plot.

   iii) Define Arithmetic Mean. State its merits.

Q4) Attempt any TWO of the following :   [2 × 4 = 8]

   i)   Define the following terms :

      a)   Dichotomous classification

      b)   Order of a class

      c)   Positive class

      d)   Ultimate class frequency

   ii) Write a note on kurtosis.

   iii) Compute Yule's coefficient of association for the following data :

      N = 20, (A) = 12, (B) = 10, (AB) = 8

Q5) Attempt any one of the following : **[1 × 5 = 5]**

i) The following data is related with the two workers doing same job in company.

	Worker A	Worker B
Mean time of completing the job (in minutes)	40	42
Standard deviation (minutes)	8	6

Which worker is more consistent?

ii) Define skewness. Explain types of skewness with the help of sketch.

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