

Roll No.

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F-45/2110

BUSINESS STATISTICS

Paper-BC-306

Semester-III

Syllabus-(Dec-19)

Time allowed : 3 Hours] [Maximum Marks : 70

SECTION-A

Note : Attempt any two questions :

1. "Statistical methods are most dangerous in the hands of the inexpert." Elucidate.
2. Following distribution gives the pattern of overtime work done by 100 employees of a company. Calculate median.

Overtime hours :	10-15	15-20	20-25	25-30	30-35	35-40
No. of Employees :	11	20	35	20	8	6

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3. For a group of 50 male workers, the mean and the standard deviation of their wages are Rs. 63 and Rs. 9 respectively. For a group of 40 female workers, these are Rs. 54 and Rs. 6 respectively. Find the standard deviation for combined group of 90 workers.
4. Explain in detail the moving average method and least squares methods of measuring trend in time series.

SECTION-B

Note : Attempt any two questions.

5. Compute rank correlation from the following data relating to ranks given by two judges in a contest :

S.No. of Candidate	1	2	3	4	5	6	7	8	9	10
Rank of Judge A :	10	5	6	1	2	3	4	7	9	8
Rank by Judge B :	5	6	9	2	8	7	3	4	10	1

6. From the following data, obtain two regression equation :

x	6	2	10	4	8
y	9	11	5	8	7

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7. Discuss the various problems faced in the construction of index numbers.

8. What are the various methods of forecasting ?
Explain them in detail

SECTION-C

Answer any ten of the following :

9. (i) Calculate four year moving average of the following data :

Year	2005	2006	2007	2008	2009	2010	2011	2012
Wages	1150	1250	1320	1400	1300	1320	1500	1700

(ii) If $y = 2 + 1.50x$ and mode of x is 15, what is the mode of y .

(iii) The quartiles of a variable are 45, 52 and 65 respectively. What is its quartile deviation ?

(iv) If the price of all commodities in a place have increased 125 times in comparison to the base

period prices, then now what is the index number of prices for the place.

(v) If $y = 3x + 4$ is the regression line of y on x and the arithmetic mean of x is -1 , what is the arithmetic mean of y ?

(vi) If the rank correlation coefficient between marks in Accounts and Statistics for a group of student is 0.6 and the sum of squares of the differences in ranks is 66, what is the number of students in the group ?

(vii) Distinguish between mean deviation and standard deviation.

(viii) What do you mean by statistics.

(ix) Explain ratio to moving average method of time series.

(x) Define regression.

(xi) What factor affect company sales ?

(xii) What is Laspyer's index number ?