

END TERM EXAMINATION**SECOND SEMESTER [B.COM.(HONS.)] MAY-JUNE-2015****Paper Code: BCOM110****Subject: Business Statistics****Time : 3 Hours****Maximum Marks :75****Note: Attempt any five questions. All questions carry equal marks.**

Q1 Out of a total number of 1807 women who were interviewed for a job in a textile company, 512 were from textile area and rest were from non-textile areas. Amongst the married women from the textile areas, 247 were experienced, 73 were inexperienced, while for the non-textile areas corresponding figures were 49 and 520. The total number of inexperienced women was 1341 of whom 111 raised in the textile areas, of the total number of women, 918 were unmarried and of these the number of experienced women in textile and non-textile areas were 154 and 16 respectively. Tabulate the data.

Q2 The median and mode of the following wage distribution of 230 workers are known to be Rs.33.5 and Rs.34 respectively. Three frequency values from the table however are missing. Find the missing values:

Wages in Rs.	0-10	10-20	20-30	30-40	40-50	50-60	60-70	Total
No. of workers	4	16	-	-	-	6	4	230

Q3 (a) Two samples of size 200 and 300 respectively have means 80 and 90 and standard deviation 5 and 6 respectively. Find the mean and standard of the combined sample of size 500.

(b) What is the relationship between mean, median and mode?

Q4 (a) Distinguish between skewness and kurtosis. What are the various tests of skewness? Explain the objective of measuring it.

(b) Karl Pearson's coefficient of skewness of a distribution is 0.4, its standard deviation is 6.5 and mean is 29.6. Find the mode and median of the distribution.

Q5 What is correlation? Explain various types of correlation. Does it always signify causes and effect relationship between the two variables?

Q6 You are given below the following information about advertisement and sales:-

	Adv. Expenditure (Rs. Lacs)	Sales (Rs. Lacs)
Mean	10	80
S.D.	2	15
Correlation coefficient, $r_{xy}=+0.7$		

(a) Calculate the two regression equations.

(b) What should be the advertisement budget if the company wants to attain sales target of Rs.100 lacs?

(c) Find the most likely sales when advertisement expenditure is Rs.15 lacs.

Q7 Explain (a) Time Reversal Test (b) Factor Reversal Test (c) Circular Test. Indicate whether Laspeyre's, Paasche's and Fisher's Ideal Index numbers satisfy one or other tests. Which index number is also called ideal index and why?

Q8 Construct Index Number of prices from the following data by:-

(a) Laspeyre's method

(b) Paasche's method

(c) Fisher's method

Commodities	1994		1995	
	Price (Rs.)	Value (Rs.)	Price (Rs.)	Value (Rs.)
A	8	100	10	90
B	10	60	11	66
C	5	100	5	100
D	3	30	2	24
E	2	8	4	20