

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.A. DEGREE EXAMINATION – ECONOMICS

THIRD SEMESTER – APRIL 2010

EC 3502/EC 3500 - QUANTITATIVE TOOLS FOR ECONOMICS

Date & Time: 26/04/2010 / 1:00 - 4:00 Dept. No.

Max. : 100 Marks

PART – A

Answer any FIVE questions in about 75 words each

(5x4 = 20 marks)

1. What are the important functions of statistics?
2. Calculate the geometric mean from the following data:
4 8 6 12 18 20
3. List the measures of variation.
4. Define skewness.
5. The first four central moments of a distribution are $\mu_1 = 0$ $\mu_2 = 2.5$ $\mu_3 = 0.7$ $\mu_4 = 18.75$, find the kurtosis of the distribution.
6. What do you mean by correlation?
7. State the two normal equations in regression.

PART – B

Answer any FOUR questions in about 300 words each

(4x10 = 40 marks)

8. Bring out the difference between classification and tabulation.
9. Represent the following information regarding a company's cost and profit using a pie diagram:
 - a. Wages –3,00,000
 - b. Materials – 5,00,000
 - c. Administration cost – 3,00,000
 - d. Other costs – 50,000
 - e. Profits – 1,00,000
10. Calculate the mean, median and mode from the following data

Class	Frequency
0-10	10
10-20	24
20-30	36
30-40	50
40-50	36
50-60	20
60-70	14
70-80	10

(P.T.O.)

11. Discuss the methods of constructing Consumer Price Index
12. Distinguish between correlation analysis and Regression analysis
13. The following data refer to sales, in thousands of rupees, of a certain product for five years. Use simple linear trend to forecast the sales for the year 2010.

Year	2003	2004	2005	2006	2007
Sales (S)	605	715	830	790	835

14. Regress Y on X:

X	68	70	73	65	71	66
Y	64	65	64	69	69	66

PART – C

Answer any TWO questions in about 900 words each

(2x20 = 40 marks)

15. What are primary and secondary data? Discuss the various methods of collecting primary data.
16. Calculate Pearson's coefficient of skewness:

Wage per day	50-100	100-150	150-200	200-250	250-300	300-350
Number of workers	40	80	150	60	30	10

17. Obtain the coefficient of correlation and comment on the relation between X & Y:

X	22	35	23	16	33	58	31	22
Y	27	34	32	24	33	48	29	25

18. Calculate Fishers Index and show how it satisfies the time reversal and factor reversal tests:

Commodity	2007		2008	
	Price	Qty	Price	Qty
A	30	50	35	45
B	32	40	32	42
C	16	55	15	60
D	8	80	10	120

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