LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.A. DEGREE EXAMINATION – **ECONOMICS**

THIRD SEMESTER – **APRIL 2013**

EC 3502/EC 3500 - QUANTITATIVE TOOLS FOR ECONOMICS

Date: 02/05/2013 Dept. No. Max. : 100 Marks
Time: 9:00 - 12:00

PART – A

Answer any FIVE questions in about 75 words each: (5 x 4 = 20 marks)

1. What are the functions of statistics ?
2. When do we use Pie diagram?
3. Distinguish between primary data and secondary data.
4. If the mean value is 25 and standard deviation is 5 find out the value of coefficient of variation..
5. What are the advantages of Arithmetic mean ?
6. What is the principle of ordinary least squares ?.
7. Give any 2 uses of index numbers.

PART – B

Answer any FOUR questions in about 300 words each: (4 x 10 = 40 marks)

8. Represent the following data by a simple Pie diagram:

subject	micro	macro	statistics	econometrics	maths	computer
Number of class hours /semester	65	60	40	30	50	25

9. Calculate the mean and standard deviation from the following data

value	90-99	80-89	70-79	60-69	50-59	40-49	30-39
frequency	2	12	22	20	14	4	1

Calculate the Harmonic mean daily income of workers in the market.

10. There are two sets of 2 figures each and their geometric means are 15 and 12 respectively. Find the combined geometric mean.

11. Explain the components of a time series.

12. Calculate the coefficient of correlation between Y and X

X	6.9	8.5	5.8	8.6	9.6	8.0	9.7
Y	2.9	3.8	6.5	2.3	5.5	3.5	3.2

13. Compare and contrast between correlation and regression analysis.

14. Estimate the trend equation by OLS for the following data:

year	2006	2007	2008	2009	2010	2011	2012
crime	35	42	44	48	46	49	51

PART – C

Answer any TWO questions in about 900 words each: **(2 x 20 = 40 marks)**

15. Explain the importance of statistics in economic analysis and business decision making.

16. Calculate the Karl Pearson's coefficient of skewness.

Class	300-400	400-500	500-600	600-700	700-800	800-900	900-1000	1000-1100	1100-1200
Frequency	14	46	58	76	68	62	48	22	5

17. Estimate both regression equations:

Y_i	20	26	29	30	25	18	26	35	35	46
X_i	25	28	30	32	35	36	38	39	42	45

18. Calculate fisher's ideal index number and prove that it satisfies Time reversal and Factor reversal test.

	(QUANTITY)		(PRICE)	
Commodity	2000 -2001	2011 -2012	2000 – 2001	2011 - 2012
A	40	50	4	5
B	64	80	8	9
C	70	70	10	10
D	10	16	2	4

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