LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

THIRD SEMESTER – **NOVEMBER 2018**

EC 3502 – QUANTITATIVE TOOLS FOR ECONOMICS

Date: 23-10-2018 Dept. No. Max. : 100 Marks

Time: 01:00-04:00

Part A

Answer any **FIVE** questions from the following: [5x4=20marks]

1. Define Statistics.
2. Distinguish between Primary data and secondary data.
3. Write a note on different Measures of Central Tendency.
4. The following data show the number of child birth to 100 families in a hospital in one year. Draw a line diagram:

No: of children	1	2	3	4	5	6	7	8
No: of families	2	18	15	10	13	22	9	11

5. Define Variance and Standard deviation.
6. The Mean and Standard deviation of a series are 25 and 5 respectively. Calculate the Coefficient of Variation.
7. What is meant by Regression?

Part B

Answer any **FOUR** questions from the following: [4x10=40marks]

8. Discuss the uses of index numbers.
9. Draw a Histogram of the following frequency distribution and show the area on your graph which represents the total number of wage earners in the age group 19- 32 years:

Age Group :	14- 15	16-17	18-20	21-24	25 -29	30-34	35-39
No: of wage earners	120	140	150	110	110	100	90

10. Calculate by step deviation method, the arithmetic mean of the following marks Obtained by students in Economics:

Marks	5	10	15	20	25	30	35	40	45	50
No: of students	20	43	75	67	72	45	39	9	8	6

11. Following are the marks obtained by two students A and B in two sets of examination:

Sets	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A's marks	44	80	76	48	52	72	68	56	60	64
B's marks	48	75	54	60	63	69	72	51	57	56

If the consistency of performance is the criterion for awarding the prize, who should get the Prize?

12. Calculate Karl Pearson's coefficient of Skewness for the following data:

X	0	1	2	3	4	5	6	7
F	12	17	29	19	8	4	1	0

13. Draw a Pie diagram to represent the following data of Investment pattern in the Five year Plan:

Agriculture & Community Development	14%
Irrigation & Power	16%
Industries & Minerals	29%
Transport & Communications	17%
Social Services	16%
Inventories	8%

14. Explain the analysis of time series.

Part C

Answer any **TWO** questions from the following: [2x20=40marks]

15. Elaborate the nature, functions and limitations of statistics.
16. Calculate Mean, Median and Mode for the following data:

AGE	No. of People	AGE	No. of People
55-60	7	35-40	30
50-55	13	30-35	33
45-50	15	25-30	28
40-45	20	20-25	14

17. Calculate Karl Pearson's correlation coefficient between the marks in economics and statistics obtained by 10 students:

Marks in Economics(X)	10	25	13	25	22	11	12	25	21	20
Marks is Statistics (Y)	12	22	16	15	18	18	17	23	24	17

(Assumed mean for the values of X and Y are 18 and 18 respectively)

18. Calculate Laspeyre's, Paasche's and Fisher's indices for the following data. Also examine which of the above indices satisfy (1) Time reversal test (2) Factor reversal test.

Commodity	Base Year		Current Year	
	Price (Po)	Quantity (Qo)	Price (P1)	Quantity (Q1)
P	6.5	500	10.8	560
Q	2.8	124	2.9	148
R	4.7	69	8.2	78
S	10.9	38	13.4	24
T	8.6	49	10.8	27