

# LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



## B.Com.DEGREE EXAMINATION –CORPORATE SECRETARYSHIP

FIRST SEMESTER – APRIL 2018

### CO 1104– FUNDAMENTALS OF STATISTICS

Date: 28-04-2018  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

#### SECTION A

Answer the following:

10 x 2 =20

1. What are the types of Correlation?
2. State the regression equation of X on Y and Y on X.
3. State the merits of graphic method.
4. What is Time Series?
5. What is Primary Data?
6. What is Bar Diagram?
7. Calculate the mean-60,61,62,63,64,65,66,70.
8. Find the Median -35,36,32,34,45,46,39.
9. The mean of 200 items is 60 totals on it were discovered that 182 were wrongly taken as 82, find the correct mean.
10. Calculate the Quartile Deviation -35,16,23,18,27,58,40.

#### SECTION B

Answer any FOUR of the following:

4 x 10 = 40

11. Explain the Components of a Time Series.
12. Distinguish between Primary data and Secondary data.
13. Explain the various measures of Central Tendency.
14. Find the correlation coefficient.

X	12	9	8	10	11	13	7
Y	14	8	6	9	11	12	3

15. Using three yearly moving averages determine the trend and short-termFluctuations.

Year	1968	1969	1970	1971	1972
Production(tonnes)	21	22	23	25	24
Year	1973	1974	1975	1976	1977
Production(tonnes)	22	25	26	27	26

16. Calculate the Harmonic mean for the following data.

x	10	12	14	16	18	20
f	5	18	20	10	6	1

17. Find the Quartile Deviation and its Coefficient for the following distribution:

Class Interval	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	8	20	25	30	12	5

18. Construct a Histogram and Frequency Polygon from the data given below:

Income (in 000's)	0-5	5-10	10-15	15-20	20-25	25-30
No. of Employees	15	20	25	40	50	20

### SECTION C

Answer any TWO of the following:

2 x 20 = 40

19. Calculate the Regression Equations of X on Y and Y on X from the following data and estimate X when Y=26 and Y when X=35. Also calculate the Coefficient of correlation.

X	10	12	13	17	18	20	24	30
Y	5	6	7	9	13	15	20	21

20. Calculate Mean, Median and Mode and verify empirical relation:

Class Interval	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	87	65	43	62	36	40	25	30

21. Ten competitors in a beauty contest are ranked by three judges in the following order:

J1	6	2	4	5	8	1	7	9	10	3
J2	5	1	3	6	7	2	9	10	8	4
J3	7	3	5	4	6	1	8	9	10	2

Use Spearman's rank correlation method to determine which pair of judges has the nearest Approach.

22. From the following data, find out which share is more stable in its value.

X	36	55	52	53	58	60	48	50	40	49
Y	108	107	105	105	102	108	104	103	107	101

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