

# LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



**B.Com. DEGREE EXAMINATION – CORPORATE SECRETARYSHIP**

**FIRST SEMESTER – NOVEMBER 2016**

**CO 1104 – FUNDAMENTALS OF STATISTICS**

Date: 09-11-2016

Dept. No.

Max. : 100 Marks

Time: 01:00-04:00

## SECTION A

**Answer the following questions:**

**10 x 2=20 marks**

1. Define Statistics.
2. What is Judgement sampling?
3. What is a pie diagram?
4. What is a weighted arithmetic mean?
5. Define Regression?
6. Obtain the value of median from the following data: 391, 384, 407, 672, 522, 777, 753, 2488 and 1490.
7. The average weight for a group of 25 boys was calculated to be 78.4. It was later discovered that the weight of one boy was misread as 69 instead of the correct weight of 96. Calculate the correct average.
8. Calculate coefficient of variation from the following:  
Mean is 90 and Standard deviation is 18.
9. Define Quartile Deviation?
10. What is Standard Deviation?

## SECTION B

**Answer any FOUR of the following:**

**4 x 10 =40 marks**

11. Explain the Scope and Limitations of Statistics.
12. Explain the different methods of Dispersion.
13. Explain the components of Time Series.
14. Prepare a Histogram from the following data

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No of students	4	6	7	8	7	8	9	5

15. Calculate the mean deviation using median from the following data:

Marks	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No of students	4	6	10	20	10	6	4

16. From the following information, find the standard deviation :

Measure	40-50	50-60	60-70	70-80	80-90	90-100
Frequency	30	16	19	20	10	5

17. Find the rank correlation from the following data :

X	84	56	89	58	59	67	74	78
Y	38	69	56	58	63	78	87	77

18. Construct a 5 yearly moving average from the following data :

Year	No. of students	Year	No. of students
2004	332	2009	405
2005	317	2010	410
2006	357	2011	427
2007	392	2012	405
2008	402	2013	438

### SECTION C

Answer any TWO of the following:

2 x 20 =40 marks

19. Calculate Mean, Median and Mode.

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No of students	5	8	3	10	8	14	2

20. From the following data , Calculate :

A) Fit a regression line of X on Y and predict  $Y=35$

b) Fit a regression line of Y on X and predict  $X=7$

c) Coefficient of correlation.

X	1	2	3	4	5
Y	10	20	15	25	30

21. Calculate Karl Pearson's coefficient of correlation for the following data:

X	78	89	97	69	59	79	68	61
Y	125	137	156	112	107	136	123	108

22. From the following, find which series is more consistent:

Variables	10-20	20-30	30-40	40-50	50-60	60-70
Series A	10	16	30	40	26	18
Series B	22	18	32	34	18	16

\_\_\_\_\_