LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FIRST SEMESTER – **NOVEMBER 2014**

CO 1104 - FUNDAMENTALS OF STATISTICS

Date : 01/11/2014   Dept. No.   Max. : 100 Marks
Time : 01:00-04:00

SECTION - A

Answer ALL questions.   **(10 x 2 = 20 marks)**

1. Discuss the characteristics of Statistics
2. Name any three probability Sampling Techniques.
3. Write short notes on Pie diagram.
4. What are the merits of Arithmetic Mean?
5. State the importance of Dispersion.
6. Write a short note on Bowley's coefficient of Skewness.
7. Define the term positive correlation.
8. State the regression equation of X on Y and YonX.
9. What are the components of Time Series?
10. State the merits of Least Squares method of trend.

SECTION - B   **(4 X 10 = 40 Marks)**

Answer any FOUR questions

11. Explainthe various functions of Statistics?
12. Describe the non-probability Sampling Techniques with examples.
13. Draw a Histogram and Frequency Polygon on the basis of the following data:

Marks	1-10	11-20	21-30	31- 40	41-50	51-60	61-70	71-80
No. ofstudents	5	8	12	14	9	7	6	4

14.Find the Quartile Qeviation for the following distribution

Marks	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
Frequency	12	16	26	24	18	13

15.Find the Mean and Variance of the combined sample from the following data:

Sample	Mean	Variance	Size
I	85	16	70
II	96	25	30
III	100	36	60

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

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

Use Spearman's rank correlation method to determine which pair of judges have the nearest approach

17. From the following data calculate the four-year Moving Average and determine the trend values. Find the short-term fluctuation.

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Value	40	44	42	45	46	42	43	48	50	46

SECTION- C   **(2 X 20 = 40 Marks)**

Answer any TWO questions

18. (a)The mean wage of 80 female workers in a factory is Rs.3000 and the mean wage of 120 male in the same factory is Rs.3500. Find the combined mean wage of 200 workers in the factory.

   (b). From the following data, find Mean, Median and Mode by using empirical.

C.I	0 -10	10-20	20 -30	30 – 40	40 -50	50 -60	60 -70
Frequency	85	55	58	45	34	38	20

(5 + 15)

19. Compute Karl Pearson's Coefficient of Skewnessfor the following data

Monthly Income(Rs.in thousands)	10 - 20	20 – 30	30 -40	40 - 50	50 - 60
No.of persons	15	20	12	14	13

(20)

20.(a) Calculate the Correlation coefficient from the following data:

X	9	8	7	6	5	4	3	2	1
Y	15	16	14	13	11	12	10	8	9

(10)

   (b)Using the appropriate regression line find y, when x = 64 from the following data:

X	65	66	67	67	69	71	72	70	65
Y	67	68	69	68	70	70	69	70	70

(10)

21.Calculate the seasonal indices by the method of Link Relatives:

Quadrant / Year	I	II	III	IV
2009	51	53	58	58
2010	55	52	53	62
2011	50	51	52	54
2012	54	48	55	54

(20)

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