LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FIRST SEMESTER – **APRIL 2016**

CO 1104 - FUNDAMENTALS OF STATISTICS

Date: 05-05-2016   Dept. No.   Max. : 100 Marks
Time: 01:00-04:00

SECTION - A

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

1. What are the characteristics of statistics?
2. What is tabulation?
3. Write short notes on bar diagram.
4. Define average.
5. State the importance of standard deviation.
6. The Karl Pearson's coefficient of skewness of a distribution is 0.32. The S.D. is 6.5 and Mean is 29.6. Find Mode.
7. Differentiate between positive and negative correlation.
8. Define regression.
9. What is meant by time series analysis?
10. Define seasonal variations.

SECTION - B

Answer any FOUR questions: **(4 X 10 = 40 Marks)**

11. Discuss functions and limitations of statistics.
12. Write brief notes on:
    (i) Census method   (ii) Sample method of data collection
13. Draw an ogive for the distribution and use it to determine the median on the basis of the following data:

Marks	20 – 29	30 – 39	40 – 49	50 – 59	60 – 69	70 – 79	80 – 89	90 – 99
No. ofstudents	7	11	24	32	9	14	2	1

14. Compute median for the following data:

Mid- value	115	125	135	145	155	165	175	185	195
Frequency	6	25	48	72	116	60	38	22	3

15. The following are some particular of the distribution of weight of boys and girls in a class:

Sample	Number	Mean	variance
Boys	100	60kg	9
Girls	50	45kg	4

Find the standard deviation of the combined data.

16. Calculate the Correlation coefficient for the age of husbands and wives:

Age of husband	23	27	28	29	30	31	33	35	36	39
Age of Wives	18	22	23	24	25	26	28	29	30	32

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

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
production	44	46	45	48	49	50	52	45	53	47

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

Answer any TWO questions

18. (a)In a series with 100 items, having mean of 40, later on it was discovered that two itemsof 45 and 35 were wrongly taken as 35 and 25. Find the correct mean

(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	45	25	23	28	22	20	24

(5 + 15)

19.(a)For a distribution Bowley's coefficient of skewness is 0.56, Q_1 = 16.4 and Median = 24.2. What is the coefficient of Quartile Deviation?

(b) Compute Karl Pearson's Coefficient of Skewness for the following data

Marks	10 – 15	15 – 20	20 – 25	25 – 30	30 -35	35 – 40	40 – 45	45 - 50
No.of students	8	16	30	45	62	32	15	6

(5 +15)

20. From the following data obtain two regression equations:

Sales	91	97	108	121	67	124	51	73	111	57
Purchase	71	75	69	97	70	91	39	61	80	47

Also estimate the purchase value if the sales value is 100.   **(20)**

21.(a)Fit a straight line trend by the method of lest square and estimate the sales for 2009.

Year	2003	2004	2005	2006	2007	2008
Sales(Rs. In lakhs)	12	13	14	15	22	26

(b)Find the Seasonal Variations by simple average method for the data given below:

Quarter Year	I	II	III	IV
1989	30	40	36	34
1990	34	52	50	44
1991	40	58	54	48
1992	54	76	68	62

(10 + 10)

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