LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.B.A. DEGREE EXAMINATION – **BUSINESS ADMINISTRATION**

FIRST SEMESTER – **NOVEMBER 2018**

BC 1100 – ELEMENTS OF STATISTICS

Date: 31-10-2018 Dept. No. Max. : 100 Marks

Time: 09:00-12:00

Section A

Answer ALL the questions **(10x2=20 Marks)**

1. Define Statistics.
2. What if primary data?
3. Define Mean.
4. What is range?
5. Define Rank correlation.
6. What is meant by time series?
7. Define sampling error.
8. What is meant by pie diagram?
9. Define standard deviation.
10. Give two advantages of regression.

Section B

Answer any FOUR questions **(4x10= 40 Marks)**

11. State the advantages and disadvantages of statistics.
12. Explain the methods of Data collection.
13. Draw a percentage bar diagram for the following data.

Expenditure	Company P	Company Q
Wages	450	700
Materials	200	500
Power	75	350
Maintenance	80	175
Profit	195	275
Total	1000	2000

14. The following is the age distribution of 100 persons in a street. Calculate the arithmetic mean.

Age group (X)	0-10	10-20	20-30	30-40	40-50	50-60
No.of.Person (F)	5	10	25	30	20	10

15. Calculate the harmonic mean for the following data

X	10	12	14	16	18	20
F	5	18	20	10	6	1

16. Calculate Karl pearson's coefficient of correlation for the following data

X	78	89	96	69	59	79	68	61
F	125	137	156	112	107	136	123	108

Take 69 and 112 as the assumed mean.

17. Fit a straight line trend by the method of least squares and calculate trend values from the below annual production (in thousand tones) of a fertilizer factory.

Year	2001	2002	2003	2004	2005	2006	2007
Production	70	75	90	91	95	98	100

Section C

Answer any TWO Questions **2x20=40 Marks**

18. Discuss the scope and functions of statistics in detail.

19. Calculate Bowley's coefficient of skewness from the following data

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No.of.persons	10	25	20	15	10	35	25	10

20. Find out the two regression lines and also calculate the coefficient of correlation.

$\sum X=250$, $\sum Y=300$, $\sum XY=7900$, $\sum X^2=6500$,

$\sum Y^2=10{,}000$, and $N=10$

21. Using 4 quarter moving average in respect of the following data,

Find(a) the trend, (b) Short term fluctuations, (c) seasonal variations.

Year	I quarter	II quarter	III quarter	IV quarter
2001	35	86	67	124
2002	38	109	91	176
2003	47	158	104	226
2004	61	177	134	240
2005	72	206	141	307

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