



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.A. DEGREE EXAMINATION – ECONOMICS

SECOND SEMESTER – NOVEMBER 2016

CO 2110 - STATISTICAL METHODS FOR ECONOMICS

Date: 15-11-2016
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

SECTION A

Answer the following:

10 x 2 = 20

- Write down any two advantages of a diagram.
- What is an Arithmetic Mean?
- What is Skewness?
- What is Correlation?
- Explain Quartile Deviation.
- Calculate the median value from the following:
891,884,991,907,1072,922,1277,1153,1490.
- From the following prices calculate Range and its Coefficient.
Prices (Rs.) 200,210,208,160,220,250.
- The mean of 200 items was 50. Later on it was discovered that two items were misread as 92 and 8 instead of 192 and 88. Find the correct mean.
- Find the coefficient of Variation from the following :
Mean is 100 and Standard deviation is 25.
- The first four central moments of a distribution are 0, 2.5, 0.7 and 18.75. Test for the Kurtosis level.

SECTION B

Answer any FOUR of the following:

4 x 10 = 40

- Explain the Components of Time Series.
- Explain the difference between Regression and Correlation.
- Draw an Histogram and the Frequency Polygon from the following data:

Income(Rs.)	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80
No. of Employees	20	35	55	100	60	45	15	10

- Find the coefficient of skewness from the following data:

Value	6	12	18	24	30	36	42
Frequency	4	7	9	18	15	10	5

- Two judges in a beauty competition rank the 10 entries as follows:

X	1	2	3	4	5	6	7	8	9	10
Y	4	8	2	3	5	7	6	9	10	1

Calculate Rank Correlation.

16. Calculate Seasonal indices using the method of simple averages.

Year	I Quarter	II Quarter	III Quarter	IV Quarter
2005	39	21	52	81
2006	45	23	63	76
2007	44	26	69	75
2008	53	23	64	84

17. Compute Quartile Deviation from the following data:

X	10-20	20-30	30-40	40-50	50-60	60-70	70-80
f	12	19	5	10	9	6	6

18. Calculate Karl Pearson's coefficient of correlation from the following

X	6	8	12	15	18	20	24	28	31
Y	10	12	15	15	18	25	22	26	28

SECTION C

Answer any TWO of the following:

2 x20=40

19. Calculate Mean, Median and Mode from the following data:

Class	2.5-7.5	7.5-12.5	12.5-17.5	17.5-22.5	22.5-27.5	27.5-32.5
Frequency	5	15	25	30	15	10

20. The scores of two batsmen A and B in ten innings during a certain season are:

32	28	47	63	71	39	10	60	96	14
19	31	48	53	67	90	10	62	40	80

Find the Coefficient of Variation and find out which player is more consistent?

21. Construct index numbers from the following data , by applying :

- (1) Laspeyre's method
- (2) Paasche's method
- (3) Bowley's method
- (4) Fisher's Ideal method and
- (5) Marshall-Edge worth method.

Commodities	2004 Price	2004 Quantity	2005 Price	2005 Quantity
A	2	8	4	6
B	5	10	6	5
C	4	14	5	10
D	2	19	2	13

22. Estimate the value of sales for the year 2009 by using the method of least square.

Find the trend values.

Year	2003	2004	2005	2006	2007
Sales(Quintals)	100	120	110	140	80
