LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.A. DEGREE EXAMINATION – ECONOMICS

SECOND SEMESTER – APRIL 2016

CO 2110 - STATISTICAL METHODS FOR ECONOMICS

Date: 26-04-2016
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

SECTION A

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

1. Discuss the characteristics of Statistics

2. List any two limitations of statistics.

3. What are the methods of collecting Primary Data?

4. What are the advantages of classifications of data?

5. There are 50 students in a class. The average marks of the 10 failed students is 25.The total marks got by the entire class is 2,810.What is the average mark of the successful candidates?

6. Find the range and its coefficients for the following data: 45, 35, 50,65,52,40.

7. Define the term correlation.

8. Describe the simple average method of measuring seasonal index.

9. Define index numbers.

10. State any limitation of index numbers.

SECTION B

Answer any FIVE questions: **(5 X 8 = 40 Marks)**

11. (a) Describe the various non - probability sampling techniques.
    (b) Explain the various types of classification.

12. Construct the histogram and frequency for the following frequency distribution:

Wight(kg)	41 – 45	46 – 50	51 – 55	56 – 60	61 – 65	66 - 70	71 – 75	76 - 80
No.of persons	4	5	9	6	11	5	7	3

13. Find the geometric mean for the following data:

marks	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 - 60
No.ofstudents	7	5	25	33	23	10

14. Calculate mode for the following distribution:

Marks	1 – 10	11 – 20	21 – 30	31 – 40	41 – 50	51 - 60
No.ofstudents	10	20	30	50	40	30

15. The scores of two players A and B in 12 rounds are given below:

A	84	87	88	94	92	87	85	86	94	93	92	90
B	89	85	84	94	93	94	95	83	86	87	86	80

Identify the better player and the more consistent player

16. Calculate the trend values by the method of moving averages, assuming a four-yearly cycle,from the following data relating to sugar production in India.

Year	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Sales	37.4	31.1	38.7	39.5	47.9	42.6	48.4	64.6	58.4	38.6	51.4	84.4

17.Construct the cost of living index number from the following group data:

Commodity	Weights	Current year price	Base year price
Rice	5	60	40
Wheat	4	40	30
Pulses	3	60	50
Oil	5	30	25
Milk	8	50	40

SECTION C

Answer any TWO questions   **(2 X 20 = 40 Marks)**

18.(a) From the following data find mean, median and mode. Verify the empirical relationship.

Marks	1 – 5	6 – 10	11 – 15	16 – 20	21 – 25	26 – 30	31 – 35	36 – 40	41 – 45
No.of students	7	10	16	30	24	17	10	5	1

(b)Two samples of size 40 and 50, have the same mean 53, but different standard deviations19 and 18, respectively. Find the standard deviation of the combined sample.   **(15+ 5)**

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)

20.a) Calculate coefficient of rank correlation from the following data:

Marks in Science	40	46	54	60	70	80	82	85	85	90	95
Marks in Maths	45	45	50	43	40	75	55	72	65	42	70

b)Find the correlation coefficient between x and y and obtain the regression line equation from the following data $X = 125$, $\Sigma Y = 100$, $\Sigma XY = 508$, $\Sigma X^2 = 650$, $\Sigma Y^2 = 460$, $N = 25$

(10 +10)

21.Using the following data compute Fisher's Ideal price index numbers and verify whether it satisfies the Time reversal and Factor reversal tests:

COMMODITY	Base year price	Base year quantity	Current Year Price	Current Year quantity
A	6	50	10	56
B	2	100	2	120
C	4	60	6	60
D	10	50	12	24
E	8	40	12	36

(20)

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