LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.A. DEGREE EXAMINATION – **ECONOMICS**

SECOND SEMESTER – NOVEMBER 2016

ST 2103 - STATISTICAL METHODS FOR ECONOMICS

Date: 15-11-2016   Dept. No.   Max. : 100 Marks
Time: 01:00-04:00

SECTION - A

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

1. Define Statistics
2. What are the measures of central tendency?
3. State any two probability sampling techniques.
4. Write the uses of scatter diagram.
5. Define coefficient of variation.
6. Define mean deviation.
7. Define positive and negative correlation.
8. Give the formula for Spearman's coefficient of correlation.
9. DefinePaasche's method.
10. Define cost of living index.

SECTION - B

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

11. Explain the scope and limitation of Statistics.
12. Explain the difference between primary data and secondary data
13. Draw a suitable diagram for the following data.

Items of expenditure	Expenditure (in RS)	
	Family A	Family B
Food	2000	3000
Clothing	480	750
Education	320	400
House rent	400	750
Miscellaneous	800	1100

14. Find the median for the following data.

Class interval	Frequency	Class interval	Frequency
0-10	5	50-60	21
10-20	14	60-70	10
20-30	29	70-80	7
30-40	21	80-90	15
40-50	25	90-100	3

15. Find the rank correlation coefficient for the ten competitors in a beauty contest who are ranked by two judges in the following order.

Judge A	1	5	4	8	9	6	10	7	3	2
Judge B	4	8	7	6	5	9	10	3	2	1

16. Find the coefficient of correlation between X and Y from the following data:

X	64	65	66	67	68	69	70
Y	66	67	65	68	70	68	72

17. Fit an appropriate regression line for finding y when x=10 from the following data:

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

18. Explain all the components of time series. **(2+2+2+2)**

SECTION C

Answer any TWO questions   **(2X20 =40 Marks)**

19. a) Explain the types of data and various methods of data collection with its merits and demerits.

   b) Explain the concept of scatter diagram **(10+10)**

20. a) Calculate quartile deviation from the following data

Variable	40-49	50-59	60-69	70-79	80-89	90-99
Frequency	306	182	144	96	42	34

   b) Find the arithmetic mean for the following data.

Daily Wages (in RS)	No.of Workers	Daily Wages (in RS)	No.of Workers
12.5-17.5	2	37.5-42.5	4
17.5-22.5	22	42.5-47.5	6
22.5-27.5	10	47.5-52.5	1
27.5-32.5	14	52.5-57.5	1
32.5-37.5	3		

   (10+10)

21. Find Karl pearson's coefficient of correlation from the following data.

X /Y	20-30	30-40	40-50	50-60	60-70	Total
15-25	5	9	3	-	-	17
25-35	-	10	25	2	-	37
35-45	-	1	12	2	-	15
45-55	-	-	4	16	5	25
55-65	-	-	-	4	2	6
Total	5	20	44	24	7	100

22. For the following data, calculate price index numbers by:

   (a) Laspeyre's method,
   (b) Paasche's method
   (c) Fisher's ideal method
   (d) Marshall-Edgeworth method
   (e) Dorbish-Bowley method.

Commodity	Base year		Current year	
	Price	Quantity	Price	Quantity
A	2	40	6	50
B	4	50	8	40
C	6	20	9	30
D	8	10	6	20
E	10	10	5	20

   (4+4+4+4+4)

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