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D.K.M. COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE – 1
SEMESTER EXAMINATIONS
NOVEMBER – 2016 **15CACC3A**
ALLIED : BUSINESS STATISTICS

Time: 3 Hrs

Max. Marks: 75

SECTION – A (10 X 2 =20)

Answer ALL the questions.

1. Define Primary data.
2. Define Sampling.
3. What are the types of central tendency?
4. Define Quartile deviation.
5. Define Correlation.
6. Define regression.
7. Define Time Series.
8. Define Interpolation.
9. Define Index Numbers.
10. Define cost of living index.

SECTION – B (5 X 5 =25)

Answer any FIVE of the following questions.

11. What are the methods of classification?
12. Calculate the median

X	10	15	8	20	18
F	24	6	30	16	26

13. Calculate Mean deviation about the median.

X	10	11	13	14	12
F	3	12	12	3	18

14. Calculate the rank correlation

X	2	1	5	3	4	7	6
F	1	3	2	4	7	5	6

15. Calculate the regression lines

X	4	5	6	8	11
F	12	10	8	7	5

16. Fit a Straight line trend under least squares.

Year	1997	1998	1999	2000	2001
Sales(Rs)	70	74	80	86	90

17. Construct the index numbers of price from the following data by applying a) Laspeyre's, method b) Paaschi's method

Commodities	1984		1985	
	P_o	G_o	P_1	G_1
A	4	8	8	6
B	10	10	12	5
C	8	14	10	10
D	4	19	4	13

18. Construct the cost of living index number.

Group	Index for 1985	Expenditure
Food	1100	46%
Clothing	430	10%
Fuel	440	7%
House rent	300	12%
Miscell	550	25%

SECTION – C (3 X 10 =30)

Answer ALL the questions.

19. a) Calculate the standard deviation of the following distribution.

Age	20 – 25	25 – 30	30 – 35	35 – 40	40 – 45	45 – 50
F	170	110	80	45	40	35

(Or)

b) Calculate Coefficient of Skewness

X	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100
Y	13	25	27	19	16

20. a) Find the Karl Pearson's coefficient of correlation.

X	5	7	3	1	9	12	8	3
Y	8	9	5	4	9	13	7	9

(Or)

b) Assuming that trend is absent, determine if there is any seasonality in the data given below.

Year	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter
1985	3.7	4.1	3.3	3.5
1986	3.7	3.9	3.6	3.6
1987	4.0	4.1	3.3	3.1
1988	3.3	4.4	4.0	4.0

What are the seasonal indices for various quarters?

21. a) Calculate Fisher's Ideal Index from the following data and prove that it satisfies both the time reversal and factor reversal tests.

Commodities	2013		2014	
	Price	Qty	Price	Qty
A	8	16	10	16
B	10	20	12	24
C	6	12	8	14
D	16	10	20	8

(Or)

- b) The following table gives the normal weight of a baby during the first six months of life.

Age	0	2	3	5	6
Weight	5	7	8	10	12

Estimate the weight of a baby at the age of 4 months.

Calculate Lagrange's method.

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