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(FOR THE CANDIDATES ADMITTED **23UCF4A1**

DURING THE ACADEMIC YEAR 2023-2026 ONLY) **REG.NO. :**

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : MAY AND 2025

B.COM FINANCE **MAXIMUM MARKS: 75**

SEMESTER:IV **TIME : 3 HOURS**

PART - III

23UCF4A1- BUSINESS STATISTICS

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS. (K1)

1. Which is one of the measure of central tendency?

a) Median b) Standard deviation

c) Mean deviation d) Quartile deviation

2. Which of the following is an absolute measure of dispersion?

a) Mean b) Coefficient of variation

c) Standard deviation d) Skewness

3. Which one is denoted to correlation between the number of children born and the number of train accident?

a) Positive correlation b) Negative correlation

c) Spurious correlation d) Rank correlation

4. Which is constructed for consumer price index?

a) In a group of people b) All people

c) Factory workers only d) A well defined section of people.

5. To which component of the time series, the term recession is attached?

a) Cycles b) Trend c) Seasonal d) Random variation

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES (K2)

6. What is Harmonic mean?

7. What is meant by Standard deviation?

8. What is Correlation?

9. What do you mean Consumer price index?

10. What is Business forecasting?

SECTION – B (5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) State the characteristics of statistics.

(OR)

b) Find the arithmetic mean by step deviation method.
Marks: 20,30, 40, 50, 50, 60, 70, 80, 90, 90

12. a) Find the Quartile Deviation for the following:- 391, 384, 591, 407, 672, 522, 777, 733, 1490, 2488.

(OR)

b) Calculate Karl Pearson's coefficient of skewness for the following data:

X	25	15	23	40	27	25	23	25	20

13. a) Distinguish between correlation and regression.

(OR)

b) Calculate the coefficient of correlation between Expenditure on Advertisement in Rs.'000 (X) and Sales in Rs. Lakhs (Y) after allowing a time lag of two months.

MONTH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT
X	40	45	47	50	53	60	57	51	48	45
Y	75	69	65	64	70	71	75	83	90	92

14. a) Enumerate the characteristics of Index numbers.

(OR)

b) From the following data construct an index for 1995 taking 1994 as base:

COMMODITIES	**A**	**B**	**C**	**D**	**E**
Price in 1994 (Rs.)	50	40	80	110	20
Price in 1995 (Rs.)	70	60	90	120	20

15. a) What are the methods of seasonal fluctuations?

(OR)

b) Calculate 5 yearly moving average of number of students studying in a Commerce College as shown by the following figures:

Year	**No.of Students**	**Year**	**No.of Students**
1987	332	1992	405
1988	311	1993	410
1989	357	1994	427
1990	392	1995	405
1991	402	1996	438

SECTION – C **(5 X 8 = 40 MARKS)**

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K4 (Or) K5)

16. a) Find the missing frequency from the following frequency distribution if Mean is 38.

Marks	10	20	30	40	50	60	70
No .of students	8	11	20	25	?	10	3

(OR)

b) Calculate the median for the following:

Value	0-9	10-19	20-29	30-39	40-49	50-59	60-69
Frequency	328	720	664	598	524	378	244

17. a) Calculate the standard deviation of the following frequency distribution.

Annual Profit (Rs.Crores)	20-40	40-60	60-80	80-100	100-120	120-140	140-160
No. of Banks	10	14	25	48	33	24	16

(OR)

b) Calculate Bowley's coefficient of skewness.

No.of Children per Family	0	1	2	3	4	5	6
No. of Families	7	10	16	25	18	11	8

18. a) Compute the coefficient of correlation between X - Advertisement Expenditure and Y - Sales.

X	10	12	18	8	13	20	22	15	5	17
Y	88	90	94	86	87	92	96	94	88	85

(OR)

b) You are given the following data:

	X	**Y**
Arithmetic mean	36	85
Standard deviation	11	8
Correlation coefficient between X and Y		0.66

(a) Find the two regression equations.

(b) Estimate the value of X when Y = 75.

19. a) Using geometric mean, calculate the cost of living index number for the year 2000.

Commodity	**Price (1990)**	**Price(2000)**	**Weight**
Food	60	108	40
Clothing	50	94	17
Fuel and Lighting	40	65	13
House rent	125	225	27
Miscellaneous	120	240	3

(OR)

b) Compute (i) Laspeyre's (ii) Paasche's and(iii) Fisher's index numbers.

	Price quantity			
Item	Base year	Current year	Base year	Current year
A	6	10	50	50
B	2	2	100	120
C	4	6	60	60
D	10	12	30	25

20. a) Discuss in detail about various components of Time series analysis.

(OR)

b) Assuming no trend in the series, calculate seasonal indices for the following data:

	Quarter			
Year	**I**	**II**	**III**	**IV**
1994	78	66	84	80
1995	76	74	82	78
1996	72	68	80	70

1997	74	70	84	74
1998	76	74	86	82