(FOR THE CANDIDATES ADMITTED

DURING THE ACADEMIC YEAR 2019 ONLY)

19 UEO 6E3

REG.NO. :

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

END-OF-SEMESTER EXAMINATIONS : JULY 2022

B.A .ECONOMICS	**MAXIMUM MARKS: 75**
VI SEMESTER	**TIME : 3 HOURS**

PART – III

STATISTICAL METHODS-II

SECTION – A   (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.
MULTIPLE CHOICE QUESTIONS.   (K1)

1 If two variables tend to move together in the same direction it is called ____correlation.

          a) Positive   b) Negative   c) Simple   d) Linear

2. Index numbers are _____.

          a) Specialized averages   b) Expressed in percentages

          c) For comparison   d) All the above

3. _____method can be used for determining the trend.

          a) Graphic   b) Aggregate expenditure

          c) Family budget   d) Pearson's

4. Probability Proportional to _____.

          a) Size Sampling   b) Cluster

          c) Multistage Sampling   d) All the above

5. NSSO refers to_____.

          a) National Series and social accounting   b) National sample survey organisation

          c) National sample statistical organization   d) National statistical and social organisation

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

6. Define regression.

7. Write the types of index numbers.

8. What is called time series?

9. What is census method of data collection?

10. What is known as social accounting?

SECTION – B (5 X 5 = 25 MARKS)

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

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

X	12	9	8	10	11	13	7
Y	14	8	6	9	11	12	3

(OR)

b) A random sample of 5 college students is selected and their grades in Mathematics and Statistics are found to be:

Mathematics	85	60	73	40	90
Statistics	93	75	65	50	80

Calculate Pearson's rank correlation coefficient.

12. a) Calculate the Index number using the aggregate expenditure method for the year 2007 with 2006 as base year, from the following data:

Commodity	Quantity in units	Price per unit in 2006 (Rs)	Price per unit in 2007 (Rs)
A	100	8	12
B	25	6	7.5
C	10	5	5.25
D	20	48	52
E	65	15	16.5
F	30	19	27

(OR)

b) From the following data calculate an index number using family budget method for the year 2007 with 2006 as base year.

Commodity	Quantity (2006)(in units)	Price per unit (Rs) 2006	Price per unit (Rs) 2007
A	100	8	12
B	25	6	7.5
C	10	5	5.25
D	20	48	60
E	25	15	16.5
F	30	9	27

13. a) Explain the components of time series.

(OR)

b) The following figures relate to the profits of a commercial concern for 8 years

Year	2000	2001	2002	2003	2004	2005	2006	2007
(Profits RS)	15420	14470	15520	21020	26120	31950	35370	34670

Calculate the trend of profits by the method of moving averages.

14. a) Explain the concept of population.

(OR)

b) Explain Quota sampling

15. a) Explain the functions of statistical organization of India.

(OR)

b) Explain the methods of collecting population census.

SECTION - C (4 X 10 = 40 MARKS)

ANSWER ANY FOUR OUT OF SIX QUESTIONS

(16ᵗʰ QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS

(FROM Qn. No : 17 to 21) (K4 (Or) K5)

16. Ten competitors in a beauty contest are ranked by three judges in the following order

1st judge	1	6	5	10	3	2	4	9	7	8
2nd judge	3	5	8	4	7	10	2	1	6	9
3rd judge	6	4	9	8	1	2	3	10	5	7

Use the rank correlation coefficient to determine which pair of judges has the nearest approach to common tastes in beauty.

17. Calculate the two regression equations of X and Y and Y on X from the data given below, taking deviations from actual means of X and Y.

Price (Rs)	10	12	13	12	16	15
Amount demanded	40	38	43	45	37	43

Estimate the likely demand when the price is Rs 20.

18. Assuming the following data calculate price index numbers for 2007 with 2006 as base by
    (*i*) Laspeyre's method   (*ii*) Paasche's method
    (*iii*) Marshall Edgeworth method and   (*iv*) Fisher's ideal method.

Commodity	2006		2007	
A	Price	Quantity	Price	quantity
A	20	8	40	6
B	50	10	60	5
C	40	15	50	15
D	20	20	20	25

19. Calculate trend value from the following data using the method of least square

Year	2002	2003	2004	2005	2006	2007
Production	7	9	12	15	18	23

20. Discuss the various methods of sampling.

21. Evaluate the methods of estimating national income.

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