(FOR THE CANDIDATES ADMITTED DURING

THE ACADEMIC YEAR 2020 – 2021 ONLY)　　SUBJECT CODE　20UCO4A5

REG.NO.

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

END-OF-SEMESTER EXAMINATIONS : JULY– 2022

B.Com. (AIDED & SF)　　　　　　　　**MAXIMUM MARKS: 70**

SEMESTER : IV　　　　　　　　　　**TIME : 3 HOURS**

PART - III

ALLIED – IV : STATISTICAL METHODS

　　　　　　　　　　　　SECTION – A　　　　**(10 X 1 = 10 MARKS)**

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS.　　　　　　　　　　　　　　**(K1)**

(Qn. No. 1 - 5)

1　　Stratified sample is preferred where _____.

　a)　Population is perfectly homogeneous　　b)　Population is non-homogeneous

　c)　Random sampling is not possible　　d)　Small samples are required

2.　　Study of scatteredness of observations is known as _____.

　a)　Measure of dispersion　　　　b)　Standard deviation

　c)　Measure of central tendency　　d)　All of these

3.　　Index number is a type of _____.

　a)　Dispersion　b)　Correlation　c)　Average　d)　All of these

4.　　The coefficient of correlation _____.

　a)　is the square of the coefficient of determination

　b)　is the square root of the coefficient of determination

　c)　is the same as r-square

　d)　can never be negative

5.　　Second differencing in time series can help to eliminate which trend?

　a)　Quadratic trend　　　　c)　Both A & B

　b)　Linear trend　　　　　d)　Price trend

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

(Qn. No. 6 - 10)

6.　　What is harmonic mean?

7.　　State the methods of measuring dispersion.

8.　　Define the term 'Correlation'.

9.　　Interpret the Fisher price index.

10.　　Inference the uses of time series.

SECTION – B (5 X 4 = 20 MARKS)

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

(Qn. No. 11 to 15)10 questions (a & b) – 2 questions from each unit. (K3)

11. a) Analyze the sources of data.

(OR)

b) Number of person living in a house is reported to be a under for 500 house in a village. Find the median number of persons in a house in the village.

Number of persons in a house	1	2	3	4	5	6	7	8	9	10
Number of Houses	26	113	120	95	60	42	21	14	5	4

12. a) Compute coefficient of quartile deviation from the following data :

Marks	10	20	30	40	50	60
No. of Students	4	7	15	8	7	2

(OR)

b) Calculate standard deviation, given the following data:
10,12,14,16,18,22,24,26,28

13. a) If $r_{12} = 0.75$, $r_{13} = 0.80$, $r_{23} = 0.70$ Find the Partial Correlation Coefficient $r_{13.2}$.

(OR)

b) Give an account of regression analysis.

14. a) From the following data different weights are used for the items according to their relative importance.

Commodity	Prices in Base Year 1980 (in Rs.)	Prices in Current Year 1988 (in Rs.)
A	10	20
B	15	25
C	40	60
D	25	40

(OR)

b)   From the following data compute Laspeyre's index number for the current year:

Items	Base Year		Current Year	
	Price (in Rs.)	Quantity (in kg.)	Price (in Rs.)	Quantity (in kg.)
A	1	6	5	8
B	2	7	4	7
C	3	8	3	6
D	4	9	2	5

15.   a)   Compute the average seasonal movement for the following series

Year	Quarterly Production			
	I	II	III	IV
2002	3.5	3.8	3.7	3.5
2003	3.6	4.2	3.4	4.1
2004	3.4	3.9	3.7	4.2
2005	4.2	4.5	3.8	4.4
2006	3.9	4.4	4.2	4.6

(OR)

b)   Describe the methods of sampling.

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.   Calculate the mean, median and mode of the number of persons per house in a village with the help of the following information:

Number of Persons per Houses	1	2	3	4	5	6	7	8	9	10
Number of Houses	26	113	120	95	60	42	21	14	5	4

17.   Enumerate the scope of statistics.

18.   Data of daily sale proceeds of a shop are as below. Calculate mean deviation and standard deviation:

Daily Sales	102	100	110	114	118	122	126
Days	3	9	25	35	14	10	1

19.   Obtain the two regression lines from the following data:

X	6	2	10	4	8
Y	9	11	5	8	7

20.   Enumerate the different types of weighted methods.

21.   Explain in detail the different methods of finding trend in a Time Series analysis.

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