(FOR THE CANDIDATES ADMITTED DURING THE ACADEMIC YEAR 2021-22 ONLY)

SUBJECT CODE 21 UEC 3A3

REG.NO.

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

END-OF-SEMESTER EXAMINATIONS : DECEMBER – 2022

B.Com. – E.COMMERCE **MAXIMUM MARKS: 70**

III SEMESTER **TIME : 3 HOURS**

PART - III

STATISTICS FOR BUSINESS

SECTION – A (10 X 1 = 10 MARKS)

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

1. Bar diagram is a ----------

   a) One dimensional diagram b) Two dimensional diagram

   c) Three dimensional diagram d) Pictogram

2. Those values which divide the series into ten equal parts are known as ----------

   a) Deciles b) Percentiles c) Quartiles d) None

3. The value of correlation always lies between ----------

   a) +3 and -3 b) +1 and -1 c) +2 and -2 d) +10 and -10

4. The statistical tool that helps to estimate the value of one variable from the given value of another is called ----------

   a) Correlation b) Regression c) Mean d) Index

5. Fisher's ideal index satisfies ----------

   a) Time reversal test b) Factor reversal test c) Circular test

   d) both time and factor reversal test

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

6. What is mode?

7 What are the methods of measuring dispersion.

8. What is correlation?

9. What is meant by dependent and independent variable?

10. Explain price index number.

SECTION – B [5 X 4 = 20 MARKS]

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

11. a) The following tables gives the marks obtained by 10 students in an examination.

Calculate the mean marks

S. No	1	2	3	4	5	6	7	8	9	10
Marks	33	35	44	34	41	45	39	46	38	47

(OR)

b) From the following data of marks scored by 7 students in statistics, locate the median marks

Marks scored	6	4	9	5	2	8	12

12. a) Calculate from the following data the mean deviation about the median

X	10	25	30	36	40	44	50	55	60
f	3	8	14	18	27	23	22	17	8

(OR)

b) The following data relate to the age of a group of Govt. employee. Calculate the standard deviation.

Age	20-25	25-30	30-35	35-40	40-45	45-50	50-55
No.of.Employees	170	110	80	45	40	30	25

13. a) Two referees in a beauty competition rank the 10 competitors as follows.

Use the rank correlation co –efficient and find out what degree of agreement is there between the referees.

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

(OR)

b) Calculate the co-efficient of concurrent deviation from the following data:

Year	2001	2002	2003	2004	2005
Supply	350	375	410	300	360
Price(Rs)	210	220	230	270	320

14 . a) Distinguish between correlation and regression concepts used in statistical analysis.

(OR)

b) Find the line of regression of Y on X from the following data. Also estimate the value of Y when X=150

X	30	50	60	80	100	110	130
Y	100	200	300	400	500	600	700

15 . a) Calculate the weighted index from the following data using appropriate method.

Material required	Unit	Quantity required	Price during	
			2013	**2014**
Paddy	100 kg	5000 Kg	5	7
Leather	Cwt	25 Cwt	20	30
Bricks	Per 1000	10000	250	300
Pipe	C.ft	300	30	32

(OR)

b) An enquiry into the budgets of the middle class families in Bombay gave the following information

Expenditure	Food 35%	Rent 15%	Clothing 20%	Fule 10%	Misc 20%
Price (2019) Rs	150	50	100	20	60
Price(2020)Rs	174	60	125	25	90

What changes in the cost of living figures of 2019 have taken place as compared to 2020?

SECTION – C **[4 X 10 = 40 MARKS]**

ANSWER ANY FOUR OUTOF SIXQUESTIONS. (16TH QUESTION COMPULSORY).

(K4/K5)

16. Compute Mean, Median and Mode

Wages(Rs)	14-20	21-27	28-34	35-41	42-48	49-55
Number	52	95	170	280	61	42

17. From the following data calculate mode.

Weight (mg)	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No.Of.Fishes	5	15	25	15	3	4	3

18. The annual income of individuals. Calculate i) quartile deviation and its co-efficient

ii) Fifth decileand iii) 50^{th} percentile.

Annual Income	530	700	420	650	350	290	1250

19. Required to measure the co-efficient of correlation between price demand in the following series:

Price (Rs)	3	5	6	9	10	12	15	20	22	28
Demand	10	12	15	18	20	22	27	30	32	34

20. Find out from the following

a) Two regression equations
b) Co-efficient of correlation
c) Most likely value of X when Y =12
d) Most likely value of Y when X = 22

X	2	4	6	8	10
Y	8	6	10	14	7

21. The following data relate to the prices and quantities of six commodities in the year 2019 and 2020. Construct the following indices.

a) Laspeyre's index
b) Passche's index
c) Fisher's ideal index

Goods	**2019**		**2020**	
	Price (rs)	**Quantity**	**Price (rs)**	**Quantity**
A	5	14	3	18
B	8	18	6	25
C	3	25	1	40
D	15	36	12	48
E	9	14	7	18
F	7	13	5	19