Code No. 10172E

B.Com., (CBCS) DEGREE EXAMINATION, APRIL 2021
THIRD SEMESTER
COMMERCE - MAIN
BUSINESS STATISTICS
(for those who joined in July 2017 onwards)

Time: Three hours

Maximum : 75 marks

PART – A   (10X1=10 marks)
Answer all the Questions Choose the Correct answer

1.A study based on complete enumeration is known as_____.
    a. Sample survey.   b. Pilot survey.
    c. Census survey.   d. None of above.

2.Statistical results are_____.
    a. Absolutely correct.   b. Not true.
    c. True on average.   d. Universally true.

3. The median of the variant values 11, 7, 6, 9, 12, 15, 19 is_____.
    a. 9.   b. 12.
    c. 15.   d. 11.

4. Which mean is most affected by extreme values?
    a. Geometric mean.   b. Harmonic mean.
    c. Arithmetic mean.   d. Trimmed mean.

5. Mean deviation is Minimum when deviations are taken from_____.
    a. Mean.   b. Median.
    c. Mode.   d. Zero.

6. Which measure of dispersion ensures highest degree of reliability?
    a. Range.   b. Mean deviation.
    c. Quartile deviation.   d. Standard deviation.

7. Rank correlation method was developed by _____.
    a. Karl Pearson.   b. R.A. Fisher.
    c. Spearman.   d. Croxten and cowden.

8. Correlation between the number of children born and the number of train accident is_____.
    a. Positive correction.   b. Spurious correlation.
    c. Negative correlation.   d. Rank correlation.

9. Index number is a_____.
    a. Measure of relative changes.   b. A special type of an average.
    c. A percentage relative.   d. All the above.

10. An appropriate method for working out consumer price index is_____.
    a. Weighted aggregate expenditure method.   b. Family budget method.
    c. Price relative's method.   d. None of the above.

PART – B   (5X5=25 marks)
Answer all the Questions Choosing either (a) or (b) Answer should not exceed 250 words
11.a. What are the merits and demerits of primary data ?
(or)
b. Describe the characters of statistics?

12.a.The average marks secured by 36 students was 52. But it was discovered that an item 64 was misread as 46. Find the correct mean of marks.

(or)

b.If in a moderately asymmetrical frequency distribution, the vaues o me lan and arithmetic mean are 72 and 78 respectively, estimate the value of the mode.

13.a. What are the merits and demerits of mean deviation.

(or)

b.Calculate Karl – Pearson' s coefficient of skewness for the following data.
25, 15, 23, 40, 27. 25, 23, 25, 20

14.a. What are the properties of correlation.

(or)

b. Explain the uses of regression analysis.

15.a.Calculate cost of living index number using Family Budget method from the following data.

Items	Weight	Price in Base year	Price in Current year
Food	10	150	225
House Rent	5	50	150
Clothing	2	30	60
Fuel	3	30	75
Others	5	50	75

(or)

h Mention the stens used in the construction of index number.

PART – C   (5X8=40 marks)

Answer all the Questions Choosing either (a) or (b) Answer should not exceed 600 words

16.a. Discuss the functions of statistics.

(or)

b. Discuss the methods of sampling.

17.a.Calculate arithmetic mean from the following data.

Temp. C	No. of days
- 40 lo - 30	10
- 30 to - 20	28
-20 to - 10	30
- 10 to 0	42
0 to 10	65
10 to 20	180
20 to 30	10

(or)

b. An aero plane flies, along the four sides of a square at speeds ot 100, 200,300 and 400 kilometers per hour respectively. What is the average speed of the plane in its flight around the square.

18.a.The table below gives the marks obtained by 10 students in statistics. Calculate standard deviation.

Student No.	1	2	3	4	5	6	7	8	9	10
Marks	43	48	65	57	31	60	37	48	78	59

(or)

b. Calculate Standard deviation from the following data.

X:	20	22	25	31	35	40	42	45
f:	5	12	15	20	25	14	10	6

19.a.In an evaluation of answer script the following marks are awarded by the examiners.

1st	88	95	70	60	50	80	75	85
2nd	84	90	88	55	48	85	82	72

Find rank correlation coefficient ?

(or)

b. In a correlation study, the following values are obtained

	X	Y
Mean	65	67
S.D	2.5	3.5

Co-efficient of correlation = 0.8
Find the two regression equations that are associated with the above values.

20.a.Construct price index number from the following data by applying
1. Laspeyere' s Method
2. Paasche' s Method
3. Fisher' s ideal Method

Commodity	2000		2001	
	Price	Qty	Price	Qty
A	2	8	4	5
B	5	12	6	10
C	4	15	5	12
D	2	18	4	20

(or)

b. Construct price index number from the following data by applying
1. Laspeyere' s Method,2. Paasche' s Method,3. Fisher' s ideal Method

Commodity	2000		2001	
	Price	Qty	Price	Qty
A	2	8	4	5
B	5	12	6	10
C	4	15	5	12
D	2	18	4	20

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