



Mamirayy

Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination – March 2021
I Semester

Class : I UG

Time : 3 Hours

Major : Commerce/B.Com CA/B.Com PA

Max. Marks: 100

18BCOI01/18BCCI01/18BCPI01 DSE – I Business Statistics

Part A
Choose the Correct Answer

10 x 1 =10

1. The word statistics is used in two senses namely
 - a. Singular and Plural
 - b. Narrow and Broad
 - c. Narrow and Wider
 - d. Small and big
2. Primary data as compared to secondary data are
 - a. Less reliable
 - b. More reliable
 - c. Not reliable
 - d. Equally reliable
3. The best measure of Central tendency is
 - a. Harmonic mean
 - b. Geometric mean
 - c. Mode
 - d. Arithmetic mean
4. Mean, median and mode are known as
 - a. Average of position
 - b. Mathematical average
 - c. Measures of dispersion
 - d. Measures of central tendency
5. Concept of standard deviation is introduced by
 - a. Karl Pearson
 - b. Leontief
 - c. Fisher
 - d. Spearman's
6. Which of the following is a relative measures of dispersion
 - a. Coefficient of variance
 - b. Variance
 - c. Standard deviation
 - d. Mean deviation
7. The coefficient of correlation
 - a. Cannot be positive
 - b. Cannot be negative
 - c. Can be either positive and negative
 - d. More than 1.
8. What is the value of 'r' if correlation is perfectly positive?
 - a. -1
 - b. +1
 - c. 0
 - d. 0.5
9. The ratio of the average deviations is called
 - a. Regression
 - b. Correlation
 - c. Skewness
 - d. Kurtosis
10. If the two lines of regression are $X+2Y-5=0$ and $2X+3Y-8=0$, the mean of X and Y are
 - a. $X= -3, Y=2$
 - b. $X=2, Y=4$
 - c. $X=1, Y=2$
 - d. $X= -1, Y=2$

Part B

5 x 6 = 30

Answer ALL Questions

Each answer should not exceed 400 words or two pages

11.a. Explain the characteristic of statistics.

(or)

11. b. Following are the marks, out of 100, obtained by 50 students in statistics.

70	45	33	64	50	25	65	75	30	20
55	65	60	58	52	56	45	42	35	40
47	51	39	61	33	59	49	41	15	55
42	63	82	65	45	63	54	52	48	46
57	53	55	42	45	39	64	55	26	18

Make a frequency distribution taking a class interval of 10 marks; take the first class interval as 0-10.

12.a. The monthly expenditure of 10 families in rupees in a certain village are given below:

Family	1	2	3	4	5	6	7	8	9	10
Income	85	70	10	75	500	8	42	250	40	36

Calculate the Harmonic mean.

(or)

12. b. Calculate the median from the following table:

Marks	10-25	25-40	40-55	55-70	70-85	85-100
Frequency	6	20	44	26	3	1

13.a. What are the properties of good measures of variation?

(or)

13.b. Calculate mean deviation from the following series:

X	10	11	12	13	14
Y	3	12	18	12	3

14.a. Describe the Scatter diagram method of correlation with its merits and demerits.

(or)

14.b. Ten competitors in a beauty contest are ranked by two judges in the following order:

X	1	6	5	10	3	2	4	9	7	8
Y	6	4	9	8	1	2	3	10	5	7

Compute the rank correlation between the two.

15.a. What are the properties of the regression coefficient?

(or)

15.b. Find two regression equations.

	X	Y
Arithmetic Mean	36	85
Standard Deviation	11	8

Correlation coefficient between X and Y is 0.66.

Part C

5x 12 = 60

Answer ALL Questions

Each answer should not exceed 800 words or four pages

16.a. Discuss the various methods of collecting primary data with merits and demerits.

(or)

16.b. Covert the following distribution into more than cumulative frequency and less than cumulative frequency.

Weekly Wages	0-20	20-40	40-60	60-80	80-100
No. of Workers	41	51	64	38	7

17.a. Explain the geometric mean and its merits and demerits.

(or)

17.b. Calculate the mean, median and mode of the following data:

X	50-53	53-56	56-59	59-62	62-65	65-68	68-71	71-74	74-77
Y	3	8	14	30	36	28	16	10	5

18.a. Explain the uses of mean deviation and its merits and limitations.

(or)

18.b. Calculate standard deviation from the following data:

Marks	10	20	30	40	50	60
No. of Students	8	12	20	10	7	3

19.a. Discuss the different types of correlation with examples.

(or)

19.b. Find out the coefficient of correlation between Covid-19 death and recovery rate in the following data:

Death	15	18	20	24	30	35	40	50
Recovery	85	93	95	105	120	130	150	160

20.a. Distinguish between the correlation and regression analysis.

(or)

20.b. Find out the regression equation of X on Y and Y on X from the following data:

X	10	12	13	17	18
Y	5	6	7	9	13

Estimate X when Y =20.
