



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 – June / July 2021
II Semester

Class : I UG
Major : Economics

Time : 3 Hours
Max. Marks : 100

18BECC06 Statistical Methods

Part A

10 x 1 = 10

Choose the Correct Answer

1. Who stated that statistics as a science of estimates and probabilities? CO1 K1
a. Horace Secrist b. R.A Fisher
c. Ya-Lun-Chou d. Boddington
2. The data collected by questionnaires are CO1 K1
a. primary data. b. secondary data
c. published data. d. grouped data
3. When data are classified according to a single characteristic, it is called CO2 K3
a. Quantitative classification b. Qualitative classification
c. Area classification d. Simple classification
4. The frequency distribution according to individual variate values is called CO2 K3
a. discrete frequency distribution b. cumulative frequency distribution
c. percentage frequency distribution d. continuous frequency distribution
5. The measure of central tendency listed below is CO3 K4
a. the raw score b. the mean
c. the range d. standard deviation
6. The sum of deviations taken from mean is CO3 K3
a. always equal to zero b. some times equal to zero
c. never equal to zero d. less than zero
7. The value of the coefficient of correlation r lies between CO4 K5
a. 0 and 1 b. -1 and 0
c. -1 and +1 d. -0.5 and +0.5
8. A measure of the strength of the linear relationship that exists between two variables is called: CO4 K2
a. Slope b. Intercept
c. Correlation coefficient d. Regression
9. The independent variable is also called CO4 K2
a. regressor b. regressand
c. predictand d. estimated
10. In the regression equation $Y = \beta_0 + \beta_1 X$, the Y is called CO5 K5
a. independent variable b. dependent variable
c. continuous variable d. discrete variable

Part B

5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or two pages

11.a. What are the limitations of statistics?

(or)

11.b. What are the various sources of secondary data?

12.a. Point out the precaution to be taken in tabulating statistical data.

CO2 K4

(or)

12.b. Explain briefly uses of graphs and charts in presenting business data.

CO2 K3

13.a. The following table gives the monthly income of 10 employees in an office

CO3 K3

Income in Rs.	14,780	15,760,	26,690	27,750	24,840	24,920	16,100	17,810	27,050	26,950
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Calculate the arithmetic mean of incomes by taking 22,000 as assumed mean.

(or)

13.b. What is Skewness? Explain its measures.

CO3 K4

14.a. Examine the types of correlation.

CO4 K4

(or)

14.b. The rank of the same 15 students in two subjects A and B are given below.

Find the Spearman's rank correlation coefficient.

CO4 K3

A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
B	10	7	2	6	4	8	3	1	11	15	9	5	14	12	13

15.a. Distinguish between correlation and regression.

CO5 K4

(or)

15.b. Write a note on regression analysis

CO5 K2

Part C

5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or four pages

16.a. Discuss the different types of sampling methods in statistics.

(or)

16.b. Explain the various methods of collecting primary data.

17.a. Evaluate the advantages and disadvantages of diagrammatic presentation of statistical data in research.

CO2 K5

(or)

17.b. Demonstrate histogram and frequency polygon of a frequency distribution of your own choice.

CO4 K2

18.a. Calculate the median for the following frequency distribution.

CO4 K3

Marks	45-50	40-45	35-40	30-35	25-30	20-25	15-20	10-15	5-10
No. of students	10	15	26	30	42	31	24	15	7

(or)

18.b. Calculate quartile deviation and the coefficient of quartile deviation from the following data.

CO4 K3

Wages	Less than 35	35-37	38-40	41-43	Over43
Number of workers	14	62	99	18	7

19.a. Explain the various methods of correlation.

CO4 K2

(or)

19.b. Calculate Karl Pearson's coefficient of correlation between expenditure and sales.

CO4 K3

Expenditure	39	65	62	90	82	75	25	98	36	78
Sales	47	53	58	86	62	68	60	91	51	84

20.a. Explain the least square method of estimating the regression line.

CO5 K4

(or)

20.b. Calculate standard error of estimate for the following data.

CO5 K5

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