



UNIVERSITY OF KELANIYA – SRI LANKA
Centre for Distance and Continuing Education
Faculty of Commerce & Management Studies

Bachelor of Commerce (Special) Degree Second Year Examination (External) – 2019

July – 2025

BCOM E 2035 - Business Statistics

No. of questions: Six (06)

Answer any five (05) questions.

Time: 03 hours

Question No. 01

- a) What is the role of “Statistics” in Business?.
- (04 Marks)
- b) “The choice of statistical analysis depends on the nature of the available data and scales of measurements that applied” What are the four types scales of measurements?. Give two examples for each explanation.
- (12 Marks)
- c) The following data represents the marks of 20 Students of Business Mathematics of a certain degree program.
- 65 , 40 , 64 , 66 , 88 , 87 , 64 , 71 , 75 , 83 , 05 , 25 , 28 , 38 , 26 , 30 , 40 , 56 , 70 , 83
- i. What is a histogram?
- ii. Is it possible to create a histogram for the above data? Comment with accurate facts.
- (04 Marks)

(Total 20 Marks)

Question No. 02

- a) Explain the following.
- (i) Independent events and Mutually exclusive events.
- (ii) Baye’s theorem.
- (06 Marks)
- b) A bag contains 06 white , 03 red and 06 blue balls. If a ball is drawn at random from the bag , replaced and the process is repeated 03 more times , what is the Probability of drawing 03 white balls and 01 blue ball?
- (04 Marks)

- c) Suppose you have an fair coin with $P(H) = 0.5$ and $P(T) = 0.5$ What is the probability of getting four successive tails on tossing the coin four times?
(04 Marks)
- d) Explain the following with a suitable example.
- Additional rule of probability.
 - Multiplication rule of probability
- (06 Marks)
(Total 20 Marks)

Question No. 03

- a) Explain how you use the following concepts to determine the shape of a distribution.
- Skewness
 - Boxplot
- (06 Marks)
- b) A large - scale farming machine dealer collects data on sales made by is its sales agents. The number of sale made on a given month by each sales agents are as follows.
- 9 , 6 , 20 , 10 , 13 , 20 , 16 , 15 , 15 , 16 ,
17 , 16 , 24 , 21 , 22 , 18 , 19 , 18 , 20 , 05
- Calculate the following.
- Range
 - Inter- quatile range
 - Mean
 - Standard deviation.
 - Variance
 - coefficient of variation.
- (12 Marks)
- c) Comment on your results.
(02 Marks)

(Total - 20 Marks)

Question No. 04

- a) i. How regression and correlation analyses are essential in business decisions.
(04 Marks)
- ii. Provide two practical examples to illustrate how business can apply these techniques in decision making.
(04 Marks)

- b) The following table shows the period of advertising time (A) (in minutes) and the number of electric engines sold (B) during the last week in a certain industry.

A	22	20	35	20	31	28
B	20	22	25	28	35	24

- i. Fit a Simple linear regression model to the data.
- ii. Calculate the correlation coefficient.
- i. Comment on your results.

(12 Marks)
(Total 20 Marks)

Question No. 05

- a) Explain how “Sampling” is essential important to day today life. (06 Marks)
- b) Why is the random sampling technique more important in the data collection process? (06 Marks)
- c) Explain any two of the following sampling techniques.
 - i. Stratified sampling technique.
 - ii. Cluster sampling technique.
 - iii. Convenience Sampling technique.

(08 Marks)
(Total 20 Marks)

Question No. 06

- a) What is meant by a “ hypothesis technique ” ? (02 Marks)
- b) What are the step in hypothesis test. (06 Marks)
- c) The explain the following.
 - i. Type one error.
 - ii. Type two error.
 - iii. Alternative hypothesis.
 - iv. One tail test and two tail test.

(12 Marks)
(Total 20 Marks)

