



University of Kelaniya – Sri Lanka

*Centre for Distance and Continuing Education*

Bachelor of Arts (General) Degree Third Examination (External) 2014/15

2019 February – April

Faculty of Social Sciences

**Economics**

**Basic Statistics and Research Methodology ECON E - 3025**

(New syllabus)

Answer four (04) questions selecting at last one from each Section

No. of questions : 08

Time : 03 Hours

**Part I**

(01).

I. Introduce measure of Central tendency and dispersion Discuss and advantages disadvantages

(10 Marks)

II. Calculate the mode man, median and Stranded Deviation of the flowing data for the marks obtained in a test by 88 Students.

(15 Marks)

Marks (x)	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50
Frequency (f)	06	16	24	25	17

(02).

I. What is Correlation analysis ? Discuss the practical importance of it (5 Marks )

II. Distinguish the difference between Correlation and regression analysis? (5 Marks )

III. Marks obtained by 10 student for Economics and Statistics are given the below table

No	1	2	3	4	5	6	7	8	9	10
Economics	65	70	45	30	40	90	50	85	60	75
Statistic	70	90	35	40	40	95	60	80	50	80

Using the above data compute the correlation coefficient and interpret it ?

IV. Introduce analysis of Rank correlation in Brief

(10 Marks)  
(10 Marks)

(03).

- (a) Explain the difference between independent and dependent variables in regression model ? (05 Marks)
- (b) Monthly salary income and advertising cost of a Company are as follows.

Sales income (1000 Rupees) ( $y_i$ )	25	35	29	24	38	12	18	27	17	30
Advertising Cost (1000 Rupees) ( $x_i$ )	8	12	11	5	14	3	6	8	4	9

- I. Plot the above data in a scatter diagram? (04 Marks)
- II. Estimate the simple linear regression model on Advertising cost on sales income ? (08 Marks)
- III. Interpret the above estimated model? (04 Marks)
- IV. How much company needs to spend on advertising to gain the income of RS. 85,000.00?

(04).

- I. What are the main features of normal Distribution? and discuss the practical importance of it ? (10 Marks)
- II. Suppose the heights of German women are (approximately) normally distributed with mean  $M = 68$  and standard deviation  $\sigma = 2.5$
- Find the percentage of German women who are
- (a) Between  $a = 66$  and  $b = 71$  inches tall
- (b) At least 6 feet tall (each 05 Marks)
- III. Explain Central Limit Theorem ? (05 Marks)

## Part II

(05).

- I. Explain what is meant by research ? and what is the mead of doing Social Science research? (15 Marks)
- II. Discuss the importance of Scientific method when Condrrectiy as research? (10 Marks)

(06).

Introduce Sample and population, and Discuss

- I. When and where we need to use sample and population to collect data? support your answer with examples. (15 Marks)
- II. Explain Probability and Non- probability Sampling methods with examples. (15 Marks)

(07).

- I. What are the types of data use for research ? Discuss the methods of collecting data (15 Marks)
- III. What are qualitative and quantitative research ? Explain with examples?

(08).

- I. What is the need of research Ethics in Social Science research Support your answer with examples.
- II. Discuss the Problems which could arise due to unethical practices of research?

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