

Name	
Roll Number	2024-45-001
No. of Sheets	



KERALA AGRICULTURAL UNIVERSITY

College of Cooperation Banking and Management

BSc (Hons.) Co-operation and Banking

Mid Term Examination - February 2026

Max. Marks: 20

Basic Econometrics (1+1)

Time: 45 Minutes

Batch : 2025

Course Code : Econ 3209

Instructions:

- Answer all questions to Part-A in the provided answer sheet.
- Submit the Answers to Part-A before attempting Part-B.
- Calculator and statistical tables are allowed.
- Rough sheets used should be attached at the end of the Question Paper.
- Excel sheets should be mailed back to the instructor after the exam ends.

Part - A

I Fill in the blanks

10*1 = 10 Marks

1. In the classical linear regression model, the error terms are assumed to have _____ mean and _____ variance.
2. The _____ estimator is used when errors are correlated and/or have non-constant variance.
3. When the variance of error terms is not constant across observations, we have the problem of _____.
4. In hypothesis testing, a _____ error occurs when we reject a true null hypothesis.
5. The _____ shows the percentage of variation in the dependent variable explained by the independent variables.
6. _____ transformation is used to estimate the Cobb-Douglas production function?
7. The _____ coefficient measures the strength and direction of linear relationship between two variables.
8. The method of _____ is used to estimate parameters in a linear regression model to minimize the sum of squared residuals.
9. The _____ statistic is used to test the overall significance of a regression model.
10. The _____ transformation is used to address non-linearity in regression models (e.g., log, square root).

II True or False

5*1 = 5 Marks

1. Weighted Least Squares is used when the error variance is not constant across observations.
2. In OLS estimation, the sum of residuals is always equal to zero.
3. A high R-squared value always indicates that the regression model is good.
4. Autocorrelation in error terms violates the assumption of independence in classical linear regression.
5. The coefficient of determination (R^2) can have negative values in linear regression.

Part - B

III Practical

15 Marks

Each of you has been provided with a personalized dataset (CSV file) containing 30 observations of wage and educ. Using this data, answer the following:

Dataset: data_2024-45-001

1. Specify the econometric model that can be estimated.
2. Write down the normal equations and solve for α and β .
3. Calculate and report the estimated values of α , β , and R^2 .
4. Write a brief interpretation of the estimated model.

Attach your calculations and interpretation in the answer sheet.

Answer Sheet

Fill in the Blanks

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

True or False

- 1.
- 2.
- 3.
- 4.
- 5.

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