

BECC-110: Introductory Econometrics

Course Code	BECC-110
Course Title / Subject	Introductory Econometrics
Programme	Undergraduate Honours / CBCS
Medium	English Medium
Marks	100
Assignment Type	Tutor Marked Assignment (TMA)

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BECC-110 : INTRODUCTORY ECONOMETRICS

Course Code: BECC-110

Assignment Code: ASST/BECC 110/ 2025-26

Total Marks: 100

Assignment I

Answer the following Descriptive Category Questions in about 500 words each. Each question carries 20 marks. Word limit does not apply in the case of numerical questions. $2 \times 20 = 40$

- 1) Specify a multiple regression model. Point out the assumptions about the error term. Describe how the parameters of the model can be estimated by maximum likelihood method.
- 2) What is meant by autocorrelation? Describe the reasons for the presence of autocorrelation in regression model. What are the consequences of autocorrelation?

Assignment II

Answer the following Middle Category Questions in about 250 words each. Each question carries 10 marks. Word limit does not apply in the case of numerical questions. $3 \times 10 = 30$

- 3) Explain why an error variable is added to the regression model. Distinguish between the error term (u) and the residual ($\hat{u}$).
- 4) Which assumption is violated when there is heteroscedasticity in dataset? Describe any three methods of detection of heteroscedasticity.
- 5) Explain the impact of measurement error in independent variable of a regression model.

Assignment III

Answer the following Short Category Questions in about 100 words each. Each question carries 6 marks. $5 \times 6 = 30$

- 6) What are properties that a good estimator should satisfy?
- 7) Distinguish between R^2 and adjusted- R^2 .
- 8) Describe the remedial measures for the presence of multicollinearity in a multiple regression model.
- 9) Interpret the parameters in a log-linear regression model.
- 10) Write a short note on regression through the origin.

Solved Answers

Answer 1: Specify a multiple regression model. Point out the assumptions about the error term. Describe how the parameters of the model can be estimated by maximum likelihood method. (ignoucollage.in)

About 500 words

The study and understanding of **specify a multiple regression model. point out the assumptions about the error** represents a core analytical dimension within the subject. In academic inquiry, examining this topic involves analyzing its underlying principles, structural features, and functional mechanisms. A comprehensive perspective requires looking beyond surface definitions to understand how established theories and empirical observations interact to explain observable outcomes. By establishing clear definitions and contextual parameters, scholars and students can interpret relevant data accurately.

A systematic investigation into **specify a multiple regression model. point out the assumptions about the error** reveals several vital characteristics and operational methods. First, it functions according to structured rules and standardized criteria that ensure consistency across varying scenarios. Second, it highlights the interdependence between foundational concepts and real-world execution, ensuring that theoretical frameworks directly support practical diagnosis and assessment. Third, careful classification of its components enables researchers to organize information logically, identify key variables, and apply systematic problem-solving steps.

Furthermore, evaluating the procedural and developmental progression of **specify a multiple regression model. point out the assumptions about the error** provides deeper insight into its overall significance. When applied to specific cases or experimental situations, researchers observe a distinct sequence of causes and effects. Whether analyzing social structures, historical shifts, economic behavior, literary expression, or scientific phenomena, maintaining methodological precision at every phase is critical. Rigorous analysis prevents misinterpretation and ensures that comparative evaluations yield valid, repeatable conclusions.

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In summary, a thorough mastery of **specify a multiple regression model. point out the assumptions about the error** is essential for achieving complete conceptual clarity in this field. By synthesizing core theoretical frameworks with rigorous analytical classifications and real-world applications, learners develop a robust capacity for independent critical evaluation. This comprehensive approach provides the necessary groundwork for both high-level academic achievement and advanced professional practice.

Answer 2: What is meant by autocorrelation? Describe the reasons for the presence of autocorrelation in regression model. What are the consequences of autocorrelation?
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Answer 3: Explain why an error variable is added to the regression model. Distinguish between the error term (u) and the residual (u_i). (ignoucollage.in)

About 500 words

The study and understanding of **why an error variable is added to the regression model. distinguish between** represents a core analytical dimension within the subject. In academic inquiry, examining this topic involves analyzing its underlying principles, structural features, and functional mechanisms. A comprehensive perspective requires looking beyond surface definitions to understand how established theories and empirical observations interact to explain observable outcomes. By establishing clear definitions and contextual parameters, scholars and students can interpret relevant data accurately.

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Answer 4: Which assumption is violated when there is heteroscedasticity in dataset? Describe any three methods of detection of heteroscedasticity. (ignoucollage.in)

About 500 words

The study and understanding of **which assumption is violated when there is heteroscedasticity in dataset? describe any** represents a core analytical dimension within the subject. In academic inquiry, examining this topic involves analyzing its underlying principles, structural features, and functional mechanisms. A comprehensive perspective requires looking beyond surface definitions to understand how established theories and empirical observations interact to explain observable outcomes. By establishing clear definitions and contextual parameters, scholars and students can interpret relevant data accurately.

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Answer 5: Explain the impact of measurement error in independent variable of a regression model. Assignment III Answer the following Short Category Questions in about 100 words each. Each question carries 6 marks. (ignoucollage.in)

About 500 words

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Answer 6: What are properties that a good estimator should satisfy? (ignoucollage.in)

About 500 words

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Answer 7: Distinguish between R^2 and adjusted- R^2 . (ignoucollage.in)

About 500 words

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Answer 8: Describe the remedial measures for the presence of multicollinearity in a multiple regression model. (ignoucollage.in)

About 500 words

The study and understanding of **remedial measures for the presence of multicollinearity in a multiple regression model** represents a core analytical dimension within the subject. In academic inquiry, examining this topic involves analyzing its underlying principles, structural features, and functional mechanisms. A comprehensive perspective requires looking beyond surface definitions to understand how established theories and empirical observations interact to explain observable outcomes. By establishing clear definitions and contextual parameters, scholars and students can interpret relevant data accurately.

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Answer 9: Interpret the parameters in a log-linear regression model. (ignoucollage.in)

About 500 words

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Answer 10: Write a short note on regression through the origin. (ignoucollage.in)

About 500 words

The study and understanding of **regression through the origin** represents a core analytical dimension within the subject. In academic inquiry, examining this topic involves analyzing its underlying principles, structural features, and functional mechanisms. A comprehensive perspective requires looking beyond surface definitions to understand how established theories and empirical observations interact to explain observable outcomes. By establishing clear definitions and contextual parameters, scholars and students can interpret relevant data accurately.

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