MEC

MASTER OF ARTS

(ECONOMICS)

ASSIGNMENTS 2025-26

Second Year Courses

(For the students who took admission in second year prior to January 2024 or in January 2024)

SCHOOL OF SOCIAL SCIENCES
INDIRA GANDHI NATIONAL OPEN UNIVERSITY,
MAIDAN GARHI-110068

Master of Arts (Economics)(TMA)

(2025-26)

Dear Student,

As explained in the Programme guide for MEC, assignments carry 30 per cent weightage in a course and it is mandatory that you have to secure at least 40 per cent marks in assignments to complete a course successfully. Note that you have to submit the assignments before appearing in Term End Examination of a course.

Before attempting the assignments, please read the instructions provided in the Programme guide sent to you separately. In this booklet we have included the assignments for all the courses pertaining to the second year. In each course there is a Tutor Marked Assignment (TMA). You have to do the assignment for those courses for which you have registered. Do remember that you have to prepare and submit the assignments separately for each course. Make sure that you submit the assignments well in time for those courses in which you plan to appear in the Term End Examination.

It is important that you write the answers to all the TMA questions in your own words. Your answers should be within the approximate range of the word-limit set for a particular section.

As mentioned in the Programme Guide, you need to submit all the assignments within the stipulated time for being eligible to appear in the term-end examination to the **Coordinator of your study centre**.

The assignments should be submitted to the Coordinator of your Study Centre:

1. **By 31st March 2026,** for the students willing to appear in June 2026 term end examination.
2. **By 30th September 2026,** for the students willing to appear in December 2026 term end examination.

You must obtain a receipt from the Study Centre for the assignments submitted and retain it. If possible, keep a xerox copy of the assignments with you.

The Study Centre will have to return the assignments to you after they are evaluated. Please insist on this. The Study Centre has to send the marks to the Student Evaluation Division at IGNOU, New Delhi.

We expect you to answer each question as per guidelines for each category as mentioned in the assignment. You will find it useful to keep the following points in mind:

- Planning: Read the assignments carefully, go through the Units on which they are based. Make some points regarding each question and then rearrange them in a logical order.

- Organisation: Be a little selective and analytic before drawing up a rough outline of your answer. Give adequate attention to your introduction and conclusion. Make sure that your answer:
  - is logical and coherent;
  - has clear connections between sentences and paragraphs, and
  - is written correctly giving adequate consideration to your expression, style and presentation.

- Presentation: Once you are satisfied with your answer, you can write down the final version for submission, writing each answer neatly and underlining the points you wish to emphasize. Make sure that the answer is within the stipulated word limit.

MECE-001: ECONOMETRIC METHODS

Tutor Marked Assignment

Course Code: MECE-001
Asst. Code: MECE-001/AST/2025-26
Maximum Marks: 100

Note: Answer all the questions. In case of numerical questions, word limit does not apply.

Note: Answer all the questions. While questions in Section A carry 20 marks each, those in Section B carry 12 marks each.

Section A

1. In the case of a two-variable regression model show that TSS = ESS + RSS. Use appropriate diagram to explain your result. In this context, define the concept of R-squared and interpret it.

2. a) What is meant by identification problem in a simultaneous equation model?

   b) In the following two-equation system check the identification status of both the equations.

$$Y_1 = \propto_1 + \propto_2 Y_2 + \beta_1 Z_2 + u_1$$

$$Y_2 = \beta_2 + \beta_3 Y_1 + \beta_4 Z_1 + \beta_5 Z_2 + u_2$$

   c) Explain how the first equation in the above model can be estimated.

Section B

3. What is meant by dynamic model? Explain how the following model can be estimated?

$$y_t = \propto + \beta x_t + \gamma y_{t-1} + u_t$$

   where $|\gamma| < 1$ and $u_t = \rho\, u_{t-1} + \varepsilon_t$. In the above model ε_t is the usual stochastic error term with mean zero and variance σ^2 and $|\rho| < 1$.

4. How do you express the multiple regression model in matrix form? Derive OLS estimator for the parameters of the model. Show that the OLS estimators are Best Linear Unbiased Estimators (BLUE).

5. What are the limitations of the linear probability model (LPM)? Explain how these limitations are taken care of by the probit model.

6. Why is the OLS method inappropriate when a dataset is having autocorrelation problem? Explain how

Durbin Watson test is used for detection of autocorrelation. Calculate Durbin-Watson statistic for the dataset given at Question 1 above and interpret the result.

7. Write short notes on the following:

a) Generalised Least Squares model

b) Measurement error in explanatory variable