MASTER OF ARTS

(ECONOMICS)

ASSIGNMENTS 2025-26

Fourth Semester Courses

(For learners appearing in term-end exams in June 2026 and December 2026 Sessions)

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THE PEOPLE'S
UNIVERSITY

**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 MAEC, assignments carry 30 per cent weightage in a course and it is mandatory that you must secure at least 40 per cent marks in assignments to complete a course successfully. Note that you must 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 **Fourth semester.** In each course there is a Tutor Marked Assignment (TMA). You must do the assignment for those courses for which you have registered. **Do remember that you must 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**. This assignment is valid for two admission cycles (**July 2025** and **January 2026**).

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:

1) **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.

2) **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:
   a) is logical and coherent;
   b) has clear connections between sentences and paragraphs, and
   c) is written correctly giving adequate consideration to your expression, style and presentation.

3) **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-101: INTRODUCTORY ECONOMETRIC METHODS

Assignment

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. The relationship between Y and X is given by $y_i = \alpha + \beta x_i + u_i$ where u_i follows classical assumptions. Consider the following set of data and answer the questions.

Y	11	12	13	14	15
X	18	16	19	22	20

    a) Estimate parameters of the model from the following data by using OLS method.
    b) What is the estimate of error variance in the above case?
    c) Find the value of R^2 for the above data.

Section B

3. Explain the concept of identification in a simultaneous equations model. Why is it called the paradox of identification?

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 is meant by multicollinearity? What are its consequences on estimates? What remedial measures do you suggest for the problem?

6. Why is the OLS method inappropriate when a dataset is having heteroscedasticity problem? Explain the White's Test to detect heteroscedasticity in a data set.

7. Write short notes on the following:
    a) Lagrange-Multiplier (LM) Test
    b) Likelihood Ratio Test