

MEC

MASTER OF ARTS
(ECONOMICS)

ASSIGNMENTS 2021-22

First Year Courses

(For July 2021 and January 2022 Sessions)



School of Social Sciences
Indira Gandhi National Open University
Maidan Garhi, New Delhi-110 068

Master of Arts (Economics)

(TMA)(

2021-2)

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.

Submission

For **July 2021** session, you need to submit the assignments by **March 31, 2022**, and for **January 2022** session by **September 30, 2022** for being eligible to appear in the term- end examination. Assignments should be submitted to the **Coordinator of your Study Centre**. Obtain a receipt from the Study Centre towards submission.

MEC-101: MICROECONOMIC ANALYSIS
Assignment

Course Code: MEC-002
Assignment Code: MEC-002/2021-22
Total Marks: 100

SECTION A

Answer all questions from this section.

2×20 = 40

1. (a) “In terms of the type of good, that is whether a good is normal or inferior, the relationship between the compensated and the uncompensated demand curves varies,” Justify the statement graphically. (8)
- (b) A consumer’s preferences over goods A and B is given by the utility function
$$U(A, B) = A^{1/2}B^{1/3}$$
Let p_A be the price of good A , p_B the price of good B and let consumer’s income be given by I .
 - (i) Derive the indirect utility function (6)
 - (ii) What is meant by Dual problem in context of the Utility and Expenditure optimisation exercise? (6)
2. (a) While modelling Insurance markets in presence of asymmetric information, a Separating equilibrium is often preferred instead of a Pooling equilibrium.” Justify the statement. Under what conditions, a separating equilibrium may also not exist. (6)
- (b) Given the von Neumann-Morgenstern utility function of an individual, $U(W) = \ln W$ where W stands for amount of money and \ln is the natural logarithm. Comment upon attitude towards risk of such an individual with the help of a diagram. (6)
- (c) Now, suppose this individual plays a game of tossing a coin where he wins Rs 2 if head turns up and nothing if tail turns up. On the basis of the given information, find
 - (i) The expected value of the game. (4)
 - (ii) The risk premium this person will be willing to pay to avoid the risk associated with the game. (4)

SECTION B

Answer all questions from this section.

5×12 = 60

3. (a) Differentiate between the Cournot and the Stackelberg models of Oligopoly. Under the Stackelberg assumptions, the Cournot solution is achieved if each firm desires to act as a follower. Do you agree? Elaborate. (6)
- (b) A monopolist operates under two plants, 1 and 2. The marginal costs of the two plants are given by

$$MC_1 = 20 + 2q_1 \text{ and } MC_2 = 10 + 5q_2$$

where q_1 and q_2 represent units of output produced by plant 1 and 2 respectively. If the price of this product is given by $20 - 3(q_1 + q_2)$, how much should the firm plan to produce

- in each plant, and at what price should it plan to sell the product? (6)
4. (a) Consider there are two firms 1 and 2 serving an entire market for a commodity. They have constant average costs of Rs 20 per unit. The firms can choose either a high price (Rs 100) or a low price (Rs 50) for their output. When both firms set a high price, total demand is 1000 units which is split evenly between the two firms. When both set a low price, total demand is 1800, which is again split evenly. If one firm sets a low price and the second a high price, the low-priced firm sells 1500 units, the high-priced firm only 200 units. Analyse the pricing decisions of the two firms as a non-co-operative game and attempt the following: (6)
- (i) Construct the pay-off matrix, where the elements of each cell of the matrix are the two firms' profits.
- (ii) Derive the equilibrium set of strategies.
- (iii) Explain why this is an example of the Prisoners' Dilemma game.
- (b) What is the Bayesian Nash equilibrium? How is it different from Perfect Bayesian equilibrium? (6)
5. What is Kaldor's compensation principle? How is it different from Hick's compensation principle? (12)
6. (a) "Homothetic production function includes Homogeneous production function as a special case." Justify this statement. (6)
- (b) Consider a production function: $Q = f(L)$, where Q represents the output and L is the factor of production. Let w be the per unit price of factor L and p be the per unit price of output Q . Using the Envelope theorem determine the supply function and the factor demand function. (6)
7. (a) What are the assumptions on which the First fundamental theorem of welfare economics rests? (4)
- (b) Consider a pure-exchange economy of two individuals (A and B) and two goods (X and Y). Individual A is endowed with 1 unit of good X and none of good Y , while individual B with 1 unit of good Y and none of good X . Assuming utility function of individual A and B to be
- $$U_A = (X_A)^\alpha (Y_A)^{1-\alpha} \text{ and } U_B = (X_B)^\beta (Y_B)^{1-\beta}$$
- where X_i and Y_i for $i = \{A, B\}$ represent individual i 's consumption of good X and Y , respectively, and α, β are constants such that $0 < \alpha, \beta < 1$. Determine the Walrasian equilibrium price ratio. (8)

MEC-002: MACROECONOMIC ANALYSIS
(Assignment)

Course Code: MEC-002
Assignment Code: MEC-002/2021-22
Total Marks: 100

Note: Answer all the questions. While questions in Section A carry 20 marks each (to be answered in about 500 words each) those in Section B carry 12 marks each (to be answered in about 300 words each). In the case of numerical questions word limits do not apply.

Section A

1. What is meant by steady state in the Solow model? Explain how Golden Rule is different from steady state.
2. Explain how the permanent income hypothesis reconciles the difference between short-run and long-run consumption behavior.

Section B

3. Policy makers should stick to rules instead of pursuing discretionary policies. Do you agree with the above statement? Substantiate your answer.
4. Explain in brief the salient features of real business cycle theory. In what respects is it different from other theories of business cycle?
5. Explain why firms may offer a higher wage to workers than the equilibrium wage rate.
6. Bring out the important issues on which Lucas criticizes Keynesian macroeconomics. To what extent the New-Keynesian economists have accepted these criticisms?
7. Write short notes on the following.
 - i) Rational expectations and adaptive expectations
 - ii) Non-accelerating Inflation Rate of Unemployment

MEC-103: QUANTITATIVE METHODS (Assignment)

Course Code: MEC-103
Asst. Code: MEC-103 / TMA/2021-22
Total Marks: 100

Section A

1. How do you use differential equations in economics? What type of situations can be helpfully depicted using differential equations? Discuss the role of initial condition in solving a differential equation. If your objective is to examine the stability of equilibrium, with the help of an example, show how a second-order differential equation helps in addressing your concern.
2. Give examples of the problems where you can make use of Poisson distribution. Does it have a probability density function? Why or why not? Discuss your answer in the context of the mean and the variance of Poisson distribution.

Section B

3. Explain the relevant considerations of making a choice between one-tailed and two-tailed tests. How would you determine the level of significance in the above tests?
4. A linear programming problem is given as
$$\text{Min } z = 30x_1 + 50x_2,$$
Subject to
$$x_1 + x_2 \geq 9$$
$$x_1 + 2x_2 \geq 12$$
$$x_1 \geq 0, x_2 \geq 0$$
Find its optimal solution.
- 5) How would you determine linear dependence of a matrix? Define the rank of a matrix in terms of its linear independence.
- 6) The correlation coefficient between nasal length and stature for a group of 20 Indian adult males was found to be 0.203. Test whether there is any correlation between the characteristics in the population.
- 7) Write short notes on the following:
 - (i) Eigen-vectors and Eigen-values
 - (ii) Taylor's expansion
 - (iii) Mixed strategy
 - (iv) Kuhn-Tucker condition

MEC-004: ECONOMICS OF GROWTH AND DEVELOPMENT

Course Code: MEC-004

Asst. Code: MEC-004 / AST-1/2021-2022

Total Marks: 100

Answer all the questions. Each question in Section A carried 20 marks while that in Section B carries 12 marks.

Section A

- 1) Discuss the main sources of economic growth. Discuss the main adverse repercussions on the economy that the process of economic growth can have.
- 2) What do you understand by technical progress? What is the relationship between technical progress and growth of total factor productivity? Discuss the various conceptions of neutral technical progress as put forward by Hicks, Harrod and Solow.

Section B

- 3) Describe the Mankiw-Romer-Weil extension to the neoclassical model to include human capital. Explain why diminishing returns to capital do not take place in the AK model.
- 4) What are the main propositions of the Real Business Cycle model? Describe the basic structure of a prototype Real Business Cycle model.
- 5) Compare and contrast Adam Smith's theory of development with that of Ricardo's.
- 6) Discuss the Harris-Todaro model of migration. What has been the impact of this model? What is its relevance for developing nations?
- 7) Explain the meaning of cost-benefit analysis. Describe briefly the usual steps taken in a typical cost-benefit exercise.

MEC-105: INDIAN ECONOMIC POLICY
Assignment (TMA)

Course Code: MEC-105

Assignment Code: MEC-105/AST/2021-22

Maximum Marks: 100

Note: Answer all the questions. While questions in Section A carry 20 marks each (to be answered in about 700 words each) those in Section B carry 12 marks each (to be answered in about 500 words each).

Section-A

1. “Indian economic environment has undergone dramatic changes with a shift in development strategy”- In the light of this statement evaluate the series of economic reforms introduced since 1991.
2. State the various dimensions of deterioration in the quality of employment in India. Also examine the policy implications of declining rate of women’s participation in the workforce.

Section B

3. Explain the major crises Indian agriculture is facing. Which reforms would you like to suggest to solve these crises.
4. What do you mean by inequality of income? How are the inequalities of income measured in an economy? Examine the policy implications of wide spread poverty and inequality in the Indian economy.
5. What is capital market? Trace the development reforms of the capital market in India and evaluate the impact of these reforms in the growth of equity and the foreign exchange market.
6. What do you mean by fiscal imbalance? What steps have been taken by the Government of India to correct the fiscal imbalances?
7. “Rapid industrialization and diversification of the industrial structure have been the twin objective of industrial policy in India”- Elaborate.

MEC-205: INDIAN ECONOMIC POLICY
Assignment (TMA)

Course Code: MEC-205

Assignment Code: MEC-205/AST/2021-22

Maximum Marks: 100

Note: Answer all the questions. While questions in Section A carry 20 marks each (to be answered in about 700 words each) those in Section B carry 12 marks each (to be answered in about 500 words each).

Section-A

1. "The pattern of structural change in the Indian economy has deviated from the development pattern of Western and South Asian economies" Examine. Further, in the light of this statement evaluate major policy initiatives (relating to economic reforms) taken by the Government of India since 2014-15.
2. What do you mean by inequality? How the inequalities of income are measured in an economy? Examine the policy implications of wide spread poverty and inequality in the Indian economy.

Section B

3. "The demographic dividend is one time opportunity and is expected to last for 25 years"- In the light of this statement explain the challenges on the way of reaping demographic dividend.
4. What do you mean by the term 'disinvestment'? Why should ownership of a public sector undertaking be diversified?
5. How the monetary policy has evolved in India? Give a brief account of the current monetary policy framework in India.
6. 'Crop diversification is the key for raising the farmer's income'? Comment. Also critically examine the strategy envisaged by the Government for promoting crop diversification in India.
7. Discuss the issues and challenges faced by MSME Sector in India. Which policy initiatives have been taken by the Government to provide an enabling environment to the MSME sector?