



INSTITUTE OF DISTANCE AND OPEN LEARNING

Gauhati University

HOME ASSIGNMENT

M. A. / M.Sc in Economics

(PREVIOUS – 2009-2010)

Guidelines for Submission:

1. Write your name, session, roll number, the topic selected and the title of the answer *clearly on the top*.
2. Each answer (essay) carries a weightage of **20 marks**.
3. Keep a margin of about 1 inch on each side of the page.
4. You can submit the answer written in your own hand-writing on clean, foolscap sheets, or A-4 sized paper.
5. In case you prefer to submit type-written answers, make sure that there are no typing errors which will deduct from the overall impression.
6. Do not submit commercially purchased answers as such a practice is deemed to be unfair.
7. You are permitted to submit your assignment by 31st January, 2010. Please note that if you submit beyond the last date of submission, as mentioned in the IDOL prospectus i.e., after 31st March, 2010, it may not be considered.

Paper 1

Microeconomic Theory

1. Analyse the inter-temporal choice of an agent who is both a producer and a consumer. Obtain the separation theorem in this context. Will the theorem hold if tastes of all agents change in a similar way? 10+5+5

Or

2. Mention the axioms of consumer's choice and show how the properties of the indifference curve are dependent on the axioms. Show how the indifference curve is affected by violation of the axioms. 10+10

Paper 2

Macroeconomic theory

1. Explain why, according to Patinkin, Keynesian under employment equilibrium is indeed a under employment disequilibrium. Explain how the full employment equilibrium is reached under the Patinkin's assumptions. 10+10

Or

2. Explain the rationale for the Philip curve relationship. Does the natural rate of unemployment hypothesis negate the existence of the relationship? Explain. 10+10

Paper 3
Mathematical Methods for Economic Analysis

1. a) 'Imposition of specific sales tax not only change the usual equilibrium condition of a monopolist, but also results in a smaller output and higher price.'
Justify the above statement using optimization technique. 6

b) Given the total cost function

$$TC = aQ^3 + bQ^2 + cQ + d$$

where Q is output. Obtain the level at which the average variable cost is minimum. Also indicate the restriction of the parameters a and b. 6

- c) The demand function of a firm under monopolistic competition is given by $p = 118 - 3Q + 4\sqrt{A}$, where P, Q and A denote price, quantity and advertisement expenditure. If the total cost function is given by $TC = 4Q^2 + 10Q + A$, find profit maximizing output and advertisement expenditure. 8

Or

2. a) A consumer has a utility function $U = x^a y^b$, where x and y are the quantities of two commodities that the consumer consumes, a and b are the parameters with restriction $1 > a > 0$ and $1 > b > 0$ and U is the utility index. Show that indifference curve of the utility function is negatively sloped and convex to the origin. 10

b) Solve the following linear programming problem. 10

$$\begin{array}{ll} \text{Max} & M = 4x_1 + 3x_2 \\ \text{subject to} & x_1 + x_2 \leq 4 \\ & 2x_1 + x_2 \leq 6 \\ & x_1 \geq 0 \text{ and } x_2 \geq 0 \end{array}$$

Paper 4
Statistics and Econometrics

1. Explain the theory of statistical inference from estimates based on a sample. Discuss in this context the ideas of 'type one error', 'level of significance' and 'type two error'. 10+10

Or

2. Show how the estimates of a linear regression model can be used to generate point and interval prediction. 20

Paper 5
Development Economics

1. Explain how projects are evaluated under Economic Planning. Discuss the relevance of shadow pricing in this context. 15+5

Or

2. Discuss the new endogenous growth model. How does it contradict the neoclassical growth model? 15+5