

**Paper Code: 42325B**

**M.A. ECONOMICS 2010-11**  
**SEMESTER – II**  
**Paper – V B**  
**MATHEMATICAL METHODS FOR ECONOMICS**

**Unit – I**

Linear Programming – Meaning and definitions, Basic concepts and Solution of LPP through Simplex Method, Primal and Dual problem, Problem of Degeneracy in LPP, Application of LPP in Transport and Storage problems and other problems in Economics.

**Unit – II**

Input-Output Model – Static and Dynamic Model, Closed and Open Input Output Model, Solution of Input Output Model, Hawkins Simon conditions.

**Unit – III**

Game Theory – Concept of Game, Two Person Zero Sum Game, Pay-off Matrix, Pure and Mixed Strategies, Maximin in and Minimax criteria and Saddle Point, Non-constant Sum Game, Prisoner's Dilemma, Linear Programming Equivalence.

**Unit – IV**

Classical and Keynesian Macro Economic Models. Trade Cycle Model of Hicks and Samuelson, Goodwin and Kalecki's Stabilization Theory.

**Unit – V**

Harrod Growth Model, Neoclassical Growth Model – Solow and Meade Growth Models with Technical Progress. Optimal Growth and Mrs. Robinson's Golden Rule, Concepts of Endogenous Growth.

## Basic Reading List

1. Allen, R.G.D. (1974) – Mathematical Analysis for Economists, Macmillan Press and ELBS, London.
2. Chiang, A.C. (1986) – Fundamental Methods of Mathematical Economics, McGraw Hill, New York.
3. Henderson, J. M. and R. E. Quandt (1980) – McGraw Hill, New Delhi.
4. Mehta, B. C. (1987) – Mathematical Economics: Microeconomic Models, Sultan Chand and Sons, New Delhi.
5. Madnani, G.M.K. (2008) – Mathematical Economics, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.
6. Mehta-Madnani (2008) – Mathematics for Economists, Sultan Chand and Company, New Delhi.
7. Arrow, K. J. and M. Intrigator (Eds.) (1982) – Handbook of Mathematical Economics, Vol. I, II and III, North Holland, Amsterdam.
8. Chung, J. W. (1993) – Utility and Production: Theory and Applications, Basil Blackwell, London.
9. Ferguson, C. E. (1976) – Neo Classical Theory of Production and Distribution.
10. Hadley, G. (1962) – Linear Programming, Addison Wesley Publishing Co., Massachusetts.
11. Mankiw, N. G. and D. Romer (Eds.) (1991) – New Keynesian Economics (2 Vols.), MIT Press, Cambridge, Mass.
12. Nash, J. F. (1996) – Essays on Game Theory, Cheltenham, U.K.
13. अग्रवाल, एच. एस. – अर्थमिति एवं गणितीय अर्थशास्त्र, आर.बी.एस.ए. पब्लिशर्स, जयपुर।

