

# Minutes of the Meeting

## Basic Mathematics for Economic

- **Course Code** : ECON021
- **Course Abbreviation** : BMEA
- **Credits**: 4
- **Duration (per week)**: 4 hours (3 lectures+1 tutorial)

Meeting held on 27<sup>th</sup> October at 3.30 p.m. and 01 November, 2022, 5 pm (online)

By: Professor Sudhir Shah and Dr Soumendu Sarkar, Department of Economics

Attended By:

Niti Khandelwal - Kirori Mal College

Gautam Jha - PGDAV (Evening)

Nitish Kashyap - Daulat Ram College

N. Shraddha Varma - Maitreyi College

### Unit 1: Economic Models

Ingredients of mathematical models - variables, constants, parameters, equations, and identities; Real number system; Sets and functions; relations and their properties; types of functions; functions of more than one variable;

Reference: Chapter 2; Chiang, A and Wainwright, K. (2005).

Limit, sequences, and series: convergence, algebraic properties, and applications;

Reference: Chapter 6 (4.4,6.1,6.4,6.5,6.6); Sydsaeter, K., Hammond, P. (2002).

Continuous functions: characterization, properties with respect to various operations and applications; Differentiable functions: characterization, properties with respect to various operations and applications; second and higher order derivatives: properties and applications.

Reference:

Chapter 6 (6.1,6.2); Sydsaeter, K., Hammond, P. (2002).

Chapter 6, Chapter 7(7.1,7.2,7.3,7.5(only market model)); Chiang, A and Wainwright, K. (2005).

### Unit 2: Equilibrium Analysis in Economics

Meaning of equilibrium; partial market equilibrium - linear and non-linear models; General market equilibrium

Reference: Chapter 3(3.1,3.2,3.3,3.4-deemphasize n-variable case & its solution); Chiang, A and Wainwright, K. (2005).

Unit 3: Linear Models and Matrix Algebras and their Applications in Economics

Matrix operations, Determinants, and Cramer's Rule and their applications

Reference: Chapter 4(except 4.7), Chapter5(5.1-5.6(only market models)); Chiang, A and Wainwright, K. (2005).

The Internal Assessment should be based on two class tests instead of other kinds of assignments.