[Summary]

Manipulations of Matrices and Determinants

Subject:	Business Economics
Course:	B. A. (Hons.), 2nd Semester, Undergraduate
Paper No. & Title:	Paper – 202 Mathematics for Business Economics
Unit No. & Title:	Unit – 4 Linear Algebra
Lecture No. & Title:	Lecture – 2 Manipulations of Matrices and Determinants

Summary

Through appropriate examples of matrices we conclude that unlike in case of real numbers, matrix multiplication is not commutative and also we show that product of two matrices may be a zero matrix without any of the matrix being a zero matrix. Similarly by appropriate example we show that "cancellation law also does not hold". We then cover the discussion on determinant, Adjoint and Inverse of a Matrix. We profusely illustrate our discussion through examples. We then return to the thing with which we started our study of Matrices viz. to simultaneous linear equations. Here also we consider several simple examples to illustrate the points that we make. As an illustration of application, we consider multi-commodity linear model and discuss how solution to Market Equilibrium of these commodities can be achieved through solving simultaneous linear equations.