

**DEPARTMENT OF COMMERCE****BUSINESS MATHEMATICS****Course & Sem: B.COM (H) Sem III****Teacher name: Dr. Anurag Maurya**

<b>S.No.</b>	<b>From</b>	<b>To</b>	<b>Topics</b>
Week 1	1-Aug-24	3-Aug-24	Introduction to matrices: Definition and types; Algebra of matrices and Business Applications
Week 2	5-Aug-24	10-Aug-24	Inverse of a matrix; Solution of system of linear equations using matrix inversion method.
Week 3	12-Aug-24	17-Aug-24	Solution of system of linear equations using Cramer's Rule; Leontief Input Output Model (Open Model Only).
Week 4	19-Aug-24	24-Aug-24	Mathematical functions: linear, quadratic, polynomial.
Week 5	26-Aug-24	31-Aug-24	Exponential, logarithmic, and logistic functions; Concepts of limit and continuity.
Week 6	2-Sep-24	7-Sep-24	Concept of Marginal Analysis; Concept of Elasticity.
Week 7	9-Sep-24	14-Sep-24	Applied Maxima and Minima problems; Economic Order Quantity and Monopolist's Optimum price.
Week 8	16-Sep-24	21-Sep-24	Partial Differentiation: Partial derivatives up to second order; Homogeneity of functions and Euler's theorem
Week 9	23-Sep-24	28-Sep-24	Application of Partial Derivatives
Week 10	30-Sep-24	5-Oct-24	Integration: Standard forms & methods; Definite integration and Finding areas.
Week 11	7-Oct-24	12-Oct-24	Application of Integration to marginal analysis; Consumer's and Producer's Surplus.
Week 12	14-Oct-24	19-Oct-24	Rates of interest: nominal, effective and their inter-relationships; Compounding and discounting of a sum.
Week 13	21-Oct-24	26-Oct-24	Applications relating to Depreciation of assets; Types of annuities: ordinary, due, deferred, continuous, perpetual.
<b>Semster Break (27-10-2024-03-11-2024)</b>			
Week 14	4-Nov-24	9-Nov-24	Determination of future and present values; Applications relating to Capital expenditure.
Week 15	11-Nov-24	16-Nov-24	Formulation of Linear programming problems; Graphical solutions of LPPs.
Week 16	18-Nov-24	23-Nov-24	Solution of LPPs by simplex method; The dual problem: Formulation and economic interpretation.