

4 <sup>th</sup> Semester	REN4E001	ENGINEERING ECONOMICS	L-T-P 3-0-0	3 CREDITS
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**Module - I (10 hours)**

**Engineering Economics-** Nature, Scope, Basic problems of an economy, Micro Economics and Macro Economics.

**Demand** - Meaning of demand, Demand function, Law of Demand and its exceptions, Determinants of demand, Elasticity of demand & its measurement (Simple numerical problems to be solved), Demand Forecasting – Meaning

**Supply**-Meaning of supply, Law of supply and its exception, Determinants of supply, Elasticity of supply, Determination of market equilibrium (Simple numerical problems to be solved).

**Module - II (08 hours)**

**Production** - Production function, Laws of returns: Law of variable proportion, Law of returns to scale

**Cost and Revenue Concepts** - Total Costs, Fixed cost, Variable cost, Total revenue, Average revenue and Marginal revenue, Cost-Output Relationships in the Short Run, and Cost-Output Relationships in the Long Run, Analysis of cost minimization.

**Module III (08 hours)**

**Market** - Basic understanding of different market structures, Determination of equilibrium price under perfect competition (Simple numerical problems to be solved), Break Even Analysis-linear approach (Simple numerical problems to be solved).

**Module - IV (12 hours)**

**Time Value of Money-** Interest - Simple and compound, nominal and effective rate of interest, Cash flow diagrams, Principles of economic equivalence.

**Evaluation of Engineering Projects**-Present worth method, Future worth method, Annual worth method, Internal rate of return method, Cost benefit analysis for public projects.

**Depreciation-** Depreciation of capital asset, Causes of depreciation, Methods of calculating depreciation - Straight line method, Declining balance method, SOYD method, After tax comparison of project.

**Module -V (07 Hours)**

**Inflation**-Meaning of inflation, types, causes, measures to control inflation.

**National Income**-Definition, Concepts of national income, Method of measuring national income.

**Banking** -Commercial bank, Functions of commercial bank, Central bank, Functions of Central Bank.

**Books:**

1. Principles of Economics by Deviga Vengedasalam and Karaunagaran Madhavan, Oxford
2. Riggs, Bedworth and Randhwa, "Engineering Economics", McGraw Hill Education India
3. C. S. Park, Contemporary Engineering Economics, 6th Edition, Pearson Education, 2015.
4. Engineering Economy by William G.Sullivan, Elin M.Wicks, C. Patric Koelling, Pearson
5. R.Paneer Seelvan, " Engineering Economics", PHI
6. Ahuja,H.L., "Principles of Micro Economics", S.Chand & Company Ltd
7. Jhingan,M.L., "Macro Economic Theory"
8. Macro Economics by S.P.Gupta, TMH