

<b>Devi Ahilya University, Indore, India Institute of Engineering &amp; Technology</b>				<b>II Year B.E. (Electronics and Instrumentation Engg.)</b>			
<b>Subject Code &amp; Name</b>	<b>Instructions Hours per Week</b>			<b>Credits</b>			
<b>4SERS4 ENGINEERING ECONOMICS</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Total</b>
	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>Duration of Theory Paper:3 Hours</b>							

### Learning Objectives :

- To make fundamentally strong base for decision making skills by applying the concepts of economics.
- Educate the students on how to systematically evaluate the various cost elements of a typical manufactured product, an engineering project or service, with a view to determining the price offer.
- Prepare engineering students to analyze profit/revenue data and carry out make economic analysis in the decision making process to justify or reject alternatives/projects.

## COURSE OF CONTENTS

### UNIT I : INTRODUCTION TO ENGINEERING ECONOMICS

Definitions, Nature and Scope of Economics; Difference between Microeconomics and Macroeconomics; Concepts of Engineering Economics- Engineering Efficiency and Economic Efficiency.

Consumer Demand Analysis: Meaning, Features and Determinants of demand; Law of Demand and its Exceptions; Reasons for Law of Demand; Importance of Law of Demand; Elasticity of Demand.

### UNIT II: SUPPLY ANALYSIS

Meaning, Supply Function, Law of Supply, Determinants of Supply, Fluctuation of supply; Elasticity of supply and its measurement.

### UNIT III : THEORY OF PRODUCTION

Production Function, Factors of Production; Law of Variable Proportions; Law of returns to scale Cost, Revenue and Profit Analysis: Cost Classifications for Predicting Cost Behavior; Concept of Profit, Gross Profit and Net Profit; Break Even Point (BEP).

#### **UNIT IV : NATIONAL INCOME**

Circular Flow of Income, Meaning and Concept of National Income: GNP/GNI, NNP/NNI, Personal Income and Disposable Income; Methods of Computing National Income -Production Method, Income Method, Expenditure Method.

#### **UNIT V : ECONOMIC STABILIZATION**

Monetary Policy- Meaning, Objectives, Tools; Fiscal Policy- Meaning, Objectives, Tools.

#### **Learning Outcomes :**

Upon completing the course, students will be able to:

- Understand major principles of economic analysis for decision making among alternative courses of action in engineering.
- Apply economic principles to prices and quantities in competitive supply and demand for goods and for money.
- Solve economic problems involving comparison and selection of alternatives by using analytical techniques including benefit-cost ratio and breakeven analysis.

#### **BOOKS RECOMMENDED:**

- [1] C S Park, "Contemporary Engineering Economics", Pearson Education, 2002.
- [2] J S Chandan, "Statistics for Business and Economics", Vikas Publishing.
- [3] H. L. Ahuja, "Principles of Microeconomics", S. Chand (G/L) & Company Ltd, 2002.
- [4] D. N. Dwivedi, "Macroeconomics Theory and Policy", Tata McGraw-Hill Publishing Company, 2010.
- [5] S Damodaran, "*Managerial Economics*", Oxford University Press, 2010.

#### **LIST OF ASSIGNMENTS (Theory):**

During the learning of course students are required to research and submit an outline of the past, present and future position of a company of their choice. The outline must include at least one properly labelled table and figure and at least two references