

## 2/4 B.Tech. THIRD SEMESTER

ME3T6

ENGINEERING ECONOMICS

Credits: 3

Lecture: 3 periods/week

Internal assessment: 30marks

Tutorial: - -

Semester end examination: 70 marks

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### Objectives:

1. Acquire basic knowledge about managerial economics, forecasting, market structures and industrial organization.
2. Justify cost/revenue data and carry out economic analyses in the decision making process to justify or reject alternatives/projects on an economic basis

### Learning Outcomes:

At the end of this course the student will be able to:

1. Use the theory of managerial economics and demand analysis to model business organization.
2. Apply elasticity of demand and forecasting theories to establish trends in business.
3. Analyze production functions and cost to manage production and Break-even point.
4. Describe market structures, Methods of pricing and Internet pricing to establish managerial theories of firm
5. Theorize about characteristics features and types of industrial organization, concept of changing business environment in post-liberalization scenario
6. Justify about types and functions of financial management, Depreciation and methods of capital budgeting to manage assets and capital.

### UNIT I

#### INTRODUCTION TO MANAGERIAL ECONOMICS:

Introduction to Managerial Economics & Demand Analysis: Definition of Managerial Economics, Characteristics and Scope – Managerial Economics and its relation with other subjects- Basic economic tools in Managerial Economics Demand Analysis: Meaning- Demand distinctions- Demand determinants- Law of Demand and its exceptions.

## **UNIT-II**

### **ELASTICITY OF DEMAND & DEMAND FORECASTING:**

Definition -Types of Elasticity of demand - Measurement of price elasticity of demand: Total outlay method, Point method and Arc method- Significance of Elasticity of Demand. Demand Forecasting: Meaning - Factors governing demand forecasting - Methods of demand forecasting (survey of buyers' Intentions, Delphi method, Collective opinion, Analysis of Time series and Trend projections, Economic Indicators, Controlled experiments and Judgmental approach) - Forecasting demand for new products- Criteria of a good forecasting method.

## **UNIT-III**

### **THEORY OF PRODUCTION AND COST ANALYSIS:**

Production Function- Isoquants and Isocosts, MRTS, Law of variable proportions- Law of returns to scale- Least Cost Combination of Inputs, Cobb-Douglas Production function - Economies of Scale.

**COST ANALYSIS:** Cost concepts, Opportunity cost, Fixed Vs Variable costs, Explicit costs Vs. Implicit costs, Out of pocket costs vs. Imputed costs.-Determination of Break-Even Point (simple problems) - Managerial Significance and limitations of BEP.

## **UNIT-IV:**

### **INTRODUCTION TO MARKETS, MANAGERIAL THEORIES OF THE FIRM &PRICING POLICIES:**

Market structures: Types of competition, Features of Perfect Competition, Monopoly and Monopolistic Competition. Price-Output Determination under Perfect Competition, Monopoly, Monopolistic Competition and Oligopoly Managerial theories of the firm - Marris and Williamson's models. Pricing Policies: Methods of Pricing-Marginal Cost Pricing, Limit Pricing, Market Skimming Pricing, Penetration Pricing, Bundling Pricing, and Peak Load Pricing. Internet Pricing Models: Flat rate pricing, Usage sensitive pricing, Transaction based pricing, Priority pricing, charging on the basis of social cost, Precedence model, Smart market mechanism model.

## **UNIT V**

### **TYPES OF INDUSTRIAL ORGANIZATION & INTRODUCTION TO BUSINESS CYCLES:**

Characteristic features of Industrial organization, Features and evaluation of Sole Proprietorship, Partnership, Joint Stock Company, State/Public Enterprises and their types. Changing business environment in post-liberalization scenario

## **UNIT VI**

### **FINANCIAL MANAGEMENT:**

Functions of financial management, simple and compound interest, Methods of evaluating alternatives- Present Worth method. Future worth Method, Annual equivalent method.

## **UNIT VII**

### **DEPRECIATION:**

Introduction, common methods of depreciation: straight line method, Declining balance method, sum of year's digits method.

## **UNIT VIII**

**CAPITAL AND CAPITAL BUDGETING:** Meaning of capital budgeting, Need for capital budgeting – Capital budgeting decisions (Examples of capital budgeting) - Methods of Capital Budgeting: Payback Method, Accounting Rate of Return (ARR), IRR and Net Present Value Method (simple problems)

### **Learning Resources**

#### **Text books:**

1. Managerial Economics and Financial Analysis, by J.V.Prabhakar Rao, Maruthi Publications, 2011
2. Managerial Economics and Financial Analysis, by N. Appa Rao. & P. Vijaya Kumar, Cengage Publications, New Delhi, 2011

#### **Reference books:**

1. Managerial Economics and Financial Analysis, by A R Aryasri, TMH 2011
2. Managerial Economics by Suma damodaran, Oxford 2011
3. Managerial Economics and Financial Analysis by S.A. Siddiqui & A.S. Siddiqui, New Age International Publishers, 2011.