VASIREDDY VENKATADRI INSTITUTE OF TECHNOLOGY NAMBUR-522508 ANDHRA

YEAR : III B.Tech   **SEMESTER:** II

COURSE NAME: ENGINEERING ECONOMICS AND MANAGEMENT

COURSE CODE: XXXXXXXX

BRANCH: CSE, IT, CSM, CSO & AID

PREREQUISITE: Basic Sciences and Humanities.

COURSE OBJECTIVE: The student should be able to

1. To understand the concept and nature of Economics and Demand. And to familiarize about the Production function, Input Output relationship, Cost-Output relationship and Break-Even Analysis.
2. To understand the nature of markets and the concepts of Money and RBI functions.
3. To familiarize with the process of management, principles, and to provide conceptual knowledge on functional management that is on Human resource management and Marketing management.
4. To learn different Accounting Systems, preparation of Financial Statement and to familiarize with the tools of project Management.
5. To understand the concept of Capital, Capital Budgeting and the techniques used to evaluate Capital Budgeting proposals.

COURSE OUTCOMES: Students will be able to:

SN	OUTCOME	Cognitive Levels as per Bloom's Taxonomy	Weightage (%)
CO1	The Learner is equipped with the knowledge of estimating the Demand and demand elasticities for a product and Input-Output-Cost relationships.	L1, L2, L3	20
CO2	The Learner is also ready to understand the nature of different markets and to have the knowledge of Money & Banking.	L1, L2	20
CO3	The Learner will acquire the knowledge on management, HRM and Marketing.	L1, L2	20
CO4	The Learner will acquire the knowledge to prepare Financial Statements and the techniques of project management.	L1, L2, L3, L4	20
CO5	The Learner can able to evaluate various investment project proposals with the help of capital budgeting techniques for decision making.	L1, L2, L3, L4	20

WEIGHTAGE OF BLOOM'S LEGENDS & PERCENTAGE OF QUESTIONS IN EXAMINATIONS:

L1 (Remembering)   = 30 - 40%,   L2 (Understanding)   = 30 - 40%,

L3 (Applying)   = 10 - 20 %,   L4 (Analysing)   = 10 - 20%,

Easy (%) = 15%-20%, Average (%) = 60% - 70%, Difficult (%) = 15% - 20%

TOTAL = L1 + L2 + L3 + L4 = 100% (on an average about 2 minutes per mark)

Note: This specification weightage in above shall be treated as a general guideline for students, teachers and paper setters. The actual distribution of marks in the question paper may vary slightly.

DETAILED SYLLABUS:

Unit-1: Introduction to Economics and Theory of Production:

Introduction to Economics; Definitions, Nature, Scope, Difference between Microeconomics & Macroeconomics –Concept of Demand, Types of Demand, Determinants of Demand-Law of Demand -Elasticity of Demand, Types of Elasticity of Demand

Theory of production; production function, Law of variable proportions & law of returns to scale, Cost; meaning, short run & long run cost, fixed cost, variable cost, total cost, average cost, marginal cost, opportunity cost. Break even analysis; meaning, explanation, simple problems.

Unit- 2: Introduction to Markets and Money:

Markets: meaning, types of markets & their characteristics (Perfect Competition, Monopoly, Monopolistic Completion, Oligopoly) National Income, GNP, GDP, NNP, NDP, Personal income.

Money: meaning, functions, types, Monetary policy- meaning, objectives, tools, fiscal policy-meaning, objectives, tools, Banking; meaning, types, functions, Central Bank- RBI; its functions, concepts; CRR, bank rate, repo rate, reverse repo rate, SLR.

Unit-3: Introduction to Management:

Concept –nature and importance of Management Functions of Management, Principles of Management

Human Resource Management: Meaning and difference between Personnel Management and Human Resource Management, Functions of Human Resource Management.

Marketing Management: Functions of Marketing - Marketing strategies based on product Life Cycle, Channels of distributions

UNIT-4: Introduction to Accounting & Project Management:

Introduction to Double Entry System, Journal, Ledger, Trail Balance and Preparation of Final Accounts with adjustments – Preparation of Financial Statements

Project Management: (PERT/CPM): Development of Network – Difference between PERT and CPM Identifying Critical Path (Simple Problems).

Unit -5: Capital and Capital Budgeting:

Capital Budgeting: Meaning of Capital-Capitalization-Meaning of Capital Budgeting- Time value of money- Methods of appraising Project profitability: Traditional Methods (payback period, accounting rate of return) and modern methods (Discounted cash flow method, Net Present Value method, Internal Rate of Return Method and Profitability Index)

TEXT BOOKS:

1. Engineering Economy and Management 1 Edition Pravin Kumar – Wiley Publication.
2. Engineering Economics & Management- Dr. Vilas Kulkarni & HardikBavishi - Vikas Publishing.
3. Aryasri: Managerial Economics and Financial Analysis, 2/e, TMH, 2005. 2. Varshney&Maheswari: Managerial Economics, Sultan Chand, 2003.
4. S A Siddhiqui&AS Siddhiqui , Managerial Economics and Financial Analysis, New Age international publishers 2013.
5. M. Kasi Reddy &Saraswathi, Managerial Economics and Financial Analysis ,PHI New Delhi 2012.
6. Principles of Management by Tripathy and Reddy.

REFERENCE BOOKS:

1. Management Fundamentals - Concepts, Application, Skill Development - RobersLusier - Thomson
2. Basics of Engineering Economy, Leland Blank & Anthony Tarquin, McGraw Hill Publication (India) Private Limited
3. Engineering Economics, R.Paneerselvam, PHI publication
4. Fundamentals of Management: Essential Concepts and Applications, Pearson Education, Robbins S.P. and Decenzo David A.
5. Economics: Principles of Economics, N Gregory Mankiw, Cengage Learning
6. Modern Economic Theory, By Dr. K. K. Dewett& M. H. Navalur, S. Chand Publications
7. Koontz &Weihrich: 'Essentials of management' TMH 2011
8. Philip Kotler& Armstrong: Principles of Marketing, Pearson publications
9. BiswajitPatnaik: Human Resource Management, PHI, 2011
10. Anil Bhat&Arya Kumar: Principles of Management, Oxford University Press, New Delhi, 2015.

ONLINE REFERENCES:

1. http://www.managementstudyguide.com
2. http://www.tutorialspoint.com

MICRO-SYLLABUS:

UNIT – I Introduction to Economics and Theory of Production:

Introduction to Economics; Definitions, Nature, Scope, Difference between Microeconomics & Macroeconomics –Concept of Demand, Types of Demand, Determinants of Demand-Law of Demand -Elasticity of Demand, Types of Elasticity of Demand.
Theory of production; production function, Law of variable proportions & law of returns to scale, Cost; meaning, short run & long run cost, fixed cost, variable cost, total cost, average cost, marginal cost, opportunity cost. Break even analysis; meaning, explanation, simple problems.

Unit	Module	Micro Content
Unit I	Concept of Economics	Economics, Definitions of Economics
		Micro economics, Macro economics
		Scope of Micro & Macro Economics
		Difference Between Micro & Macro Economics
		Meaning & Definitions of Managerial Economics
	Basic Economic tools of Managerial economics	Opportunity cost Principle
	Concept of Demand	What is Demand, Demand Analysis & Objectives
	Types of Demand	Demand distinctions, Demand function
		Factors determining demand
	Demand Schedule	Individual demand schedule, Market demand schedule
	Demand Curve	Individual demand curve, Market demand curve
	Law of Demand	Assumption of law of demand, Change in demand, Exceptions of law of demand, why does demand curve slope downwards.
	Elasticity of Demand, Types of Elasticity of Demand & Measurement	Meaning of elasticity of demand, types of Price and income elasticity of demand, factors effecting elasticity of demand, measurements of elasticity of demand, significance of elasticity of demand
	Theory of Production	Production function, Production process, importance of production, assumptions
	Laws of Returns to scale	Schedule and graph
	Cost Analysis	Types of costs, cost & output relationship in short run and long run
	Break even Analysis	Uses, limitations of Break even analysis, Key terminology in Break analysis, Simple problems on BEP, graphical representation of Break even analysis.

UNIT - II Introduction to Markets and Money:

Markets: meaning, types of markets & their characteristics (Perfect Competition, Monopoly, Monopolistic Completion, Oligopoly).National Income, GNP, GDP, NNP, NDP, Personal income and GST (Goods & Service Tax).

Money: meaning, functions, types, Monetary policy- meaning, objectives, tools, fiscal policy-meaning, objectives, tools, Banking; meaning, types, functions, Central Bank- RBI; its functions, concepts; CRR, bank rate, repo rate, reverse repo rate, SLR.

Unit	Module	Micro Content
Unit II	Market Structures	Meaning, definitions, types of market
	Perfect Competition	Features
	Monopoly	Features

	Monopolistic competition	Features
	Oligopoly	features
	Macro Economics	National income, ,GNP, GDP, NNP, NDP, Personal Income and GST
	Money	Functions, types
		Monetary Policy
		Fiscal Policy
	Banking	Types, Functions
	RBI	Concept and functions
	Bank Rates	CRR, bank rate, repo rate, reverse repo rate, SLR

UNIT – III Introduction to Management:

Concept –nature and importance of Management Functions of Management, Principles of Management.

Human Resource Management: Meaning and difference between Personnel Management and Human Resource Management, Functions of Human Resource Management.

Marketing Management: Functions of Marketing - Marketing strategies based on product Life Cycle, Channels of distributions.

	Management	Concepts, functions, Principles
	HRM	Concepts of HRM, Personnel Management
		Diff B/w HRM & PM
		Function of HRM
Unit III	Marketing Management	Concepts of Marketing
		Functions of Marketing
		Product Life Cycle
		Marketing strategies based on product Life Cycle
		Channels of distributions.

UNIT – IV Introduction to Accounting & Project Management:

Introduction to Double Entry System, Journal, Ledger, Trail Balance and Preparation of Final Accounts with adjustments – Preparation of Financial Statements.

Project Management: (PERT/CPM): Development of Network – Difference between PERT and CPM Identifying Critical Path (Simple Problems).

	Financial Accounting	Meaning, definitions, objectives & significance, users of accounting, accounting cycle, GAAP.
	Book Keeping	Single and double entry book keeping, types of Accounting
	Journal	Features, Pro-forma, Advantages & Limitations, preparation of journal entries, simple problems
Unit IV	ledger	Features, Pro-forma, Advantages & Limitations, preparation of ledger, simple problems.
	Trial Balance	Features, Pro-forma, Advantages & Limitations, preparation of Trial balance, simple problems.

		Trading account- Pro-forma, Simple problems
	Final accounts	Profit & Loss account- Pro-forma, Simple problems
		Preparation of balance sheet with simple adjustments
	Project Management	Net work Analysis –Simple Problems
		PERT – Simple Problems
		CPM – Simple Problems
		Diff B/w PERT & CPM

UNIT - V Capital and Capital Budgeting:

Capital Budgeting: Meaning of Capital-Capitalization-Meaning of Capital Budgeting-Time value of money- Methods of appraising Project profitability: Traditional Methods (payback period, accounting rate of return) and modern methods (Discounted cash flow method, Net Present Value method, Internal Rate of Return Method and Profitability Index).

	Capital	What is capital, need of capital types of capital
		Types of fixed capital, types of working capital
	Capital Budgeting	Meaning, Nature & scope of capital budgeting
		Capital budgeting procedure, capital budgeting decisions, method of capital budgeting.
Unit V	Payback period	Meaning, formula, advantages & disadvantages, simple problems
	Accounting rate of return(ARR)	Meaning, formula, advantages & disadvantages, simple problems
	Net present value (NPV)	Meaning, formula, advantages & disadvantages, simple problems
	Profitability index (PI)	Meaning, formula, advantages & disadvantages, simple problems
	Internal rate of return (IRR)	Meaning, formula, advantages & disadvantages, simple problems

Code No : XXXXX

R20

III B. TECH II SEMESTER REGULAR EXAMINATION MODEL PAPER
ENGINEERING ECONOMICS AND MANAGEMENT
(CSE, IT, CSM, CSO & AID)

Time : 3 Hours   Max. Marks : 70

Note : Answer **ONE** question from each unit **(5 × 14 = 70 Marks)**
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UNIT-I	CO	BL

1.	a)	Define Economics. Explain the difference between Economics and Managerial Economics.	[7M]	CO1	L1
	b)	How do you measure Elasticity of Demand? Explain the methods involved in it.	[7M]	CO1	L2
		(OR)			
2.	a)	Explain key terms involved in Break –Even analysis with a neat graph.	[7M]	CO1	L1
	b)	Discuss the relationship of Cost and Output in short run and long run.	[7M]	CO1	L2
		UNIT-II			
3.	a)	Explain Oligopoly market structure in detail.	[7M]	CO2	L2
	b)	Explain 'Monetary Policy', its objectives and tools.	[7M]	CO2	L1
		(OR)			
4.	a)	Explain 'repo rate' and 'reverse repo rate'.	[7M]	CO2	L2
	b)	Explain 'Fiscal Policy' its objectives and tools.	[7M]	CO2	L3
		UNIT-III			
5.	a)	Define Management. Explain the nature and scope of management.	[7M]	CO3	L2
	b)	What is the role of HR Manager in development and growth of an organization?	[7M]	CO3	L3
		(OR)			
6.	a)	What could be the different objectives of management can set for itself? Illustrate.	[7M]	CO3	L3
	b)	Explain how market research can be carried out for formulating marketing strategy.	[7M]	CO3	L2
		UNIT-IV			
7.	a)	Explain Accountancy conventions.	[7M]	CO4	L1
	b)	Journalize following transactions in the Books of M/S. Telugunadu Industries Ltd., for the month of Oct-15	[7M]	CO4	L3

Date	Transaction Description	Amount Rs.
01-10-2015	Business Commenced with Cash	5,00,000/-
03-10-2015	Deposited in Costal Andhra Bank	3,00,000/-
07-10-2015	Purchased Goods from M/s. LCB Ltd.	25,00,000/-
09-10-2015	Sold Goods to M/s. ANL Ltd.	50,00,000/-
15-10-2015	Purchased Motor Vehicle from M/s. TML Ltd.	10,00,000/-
21-10-2015	Purchased Office Furniture from M/s. Godrej Ltd.	2,00,000/-
30-10-2015	Withdrawn Cash for office purpose	1,00,000/-
31-10-2015	Paid Salaries & Rent in Cash	75,000/-

		(OR)			

8.	a)	What are the steps involved in identifying critical path for Project Management?	[4M]	CO4	L2
	b)	A PERT network has the following activities with their time estimates given below. You are required to calculate the expected time of activities, draw the network and find the critical path and its duration.	[10M]	CO4	L3

Activity	Optimistic time	Most likely time	Pessimistic time
0 – 1	2	3.5	8
0 – 2	3	3.75	6
0 – 3	1	2.5	7
1 – 2	3	7.5	9
1 – 4	4	5.5	10
2 – 4	2	5	8
3 – 4	2	2.75	5
3 – 5	3	6	9
4 – 5	2	5	8

		UNIT-V			
9.	a)	Define capital budgeting and explain the steps involved in capital budgeting.	[7M]	CO5	L1
	b)	Explain briefly about Average Rate of Return Method.	[7M]	CO5	L2
		(OR)			
10.		A company has to select one of the following projects:	[14M]	CO5	L3

Cash inflows(years) Rs/-	Project A	Project B
1	6,000	1,000
2	2,000	2,000
3	2,000	2,000
4	4,000	5,000
Cost of the Project	11,000	10,000

i) Using Net Present Value methods suggest which project is preferable at 10% discount factor.
ii) Using PBP method suggest which project is preferable.

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THE ABOVE MODEL PAPER ATTAINMENTS OF BLOOM'S TEXONOMY AS FOLLOWS

L1: 5*7 = 35 = 25%
L2: 8*7 = 56 = 40%
L3: 5*7+1*14 = 49 = 35%

SIGNATURES OF

COURSE COORDINATER   MODULE COORDINATER   HOD