Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

MBA- ENGINEERING MANAGEMENT-Semester IV (20-22)

MBAI401C STRATEGIC MANAGEMENT

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment				
MBAI401C	Strategic Management	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives

The objective of teaching this course is to enable students to integrate knowledge of various functional areas and other aspects of management, required for perceiving opportunities and threats for an organization in the long run and second generation planning and implementation of suitable contingency strategies for seizing / facing these opportunities & threats.

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

1. Students will develop understanding of project planning and ability to monitor and control projects and risk involved. In addition, they become familiar with tools and techniques used in managing projects.

Unit I: Introduction

1. Meaning, Need and Process of Strategic Management
2. Business Policy, Corporate Planning and Strategic Management
3. Single and Multiple SBU organizations
4. Strategic Decision–Making Processes – Rational–Analytical
5. Intuitive-Emotional, Political – Behavioral; Universality of Strategic Management
6. Strategists at Corporate Level and at SBU Level
7. Interpersonal, Informational and Decision Roles of a Manager

Unit II: Mission, Business Definition and Objectives

1. Need, Formulation and changes
2. Hierarchy of objectives, Specificity of Mission and Objectives
3. SWOT Analysis, General, Industry and International Environmental Factors
4. Analysis of Environment, Diagnosis of Environment – factors influencing it
5. Environmental Threat and Opportunity Profile (ETOP)
6. Internal Strengths and Weaknesses
7. Factors affecting; Techniques of Internal Analysis; Diagnosis of Strengths and Weaknesses; Strategic Advantage Profile (SAP)

Unit III: Strategy Alternatives, Grand Strategies and their sub strategies

1. Stability, Expansion, Retrenchment and Combination
2. Internal and External Alternatives
3. Related and Unrelated Alternatives
4. Horizontal and Vertical Alternatives
5. Active and Passive Alternatives
6. International Strategy Variations

Unit IV: Strategic Choice and Analysis

1. Managerial Choice Factors, Choice Processes – Strategic Gap Analysis
2. ETOP-SAP Matching, BCG Product – Portfolio Matrix
3. G.E. Nine Cell Planning Grid; Contingency Strategies
4. Prescriptions for choice of Business Strategy; Choosing International Strategies

Unit V: Strategy Implementation, Concept, Barriers, Implementation Process

1. Project & Procedural Implementation
2. Resource Allocation; Structural Implementation
3. Plan and Policy Implementation; Leadership Implementation
4. Behavioral Implementation, Implementing Strategy in International Setting

Suggested Readings

1. Kazmi, Ajhar (2009***). Strategic Management and Business Policy***. New Delhi: Tata McGraw Hill.
2. Lomash, Sukul & Mishra P.K. (2003).***Business Policy & Strategic Management***. New Delhi: Vikas Publication.
3. Trehan, Alpana (2010).***Strategic Management***. Dreamtech: Wiley.
4. Nag, A. (2011). ***Strategic Management. Analysis. Implementation. Control***. Delhi: Vikas Publication.
5. Parthasarthy, Raghavan (2008). ***Fundamentals of Strategic Management***. India: Wiley.
6. Pankaj, Ghemawat (2006).***Strategy and the Business Landscape***. Pearson.
7. Haberberg, Adrian & Rieple Alison (2010).***Strategic Management***. New York: Oxford Press.
8. Tushman (2010.) ***Managing Strategic Innovation& Change***. New York : Oxford Press

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

MBAI402C SUPPLY CHAIN MANAGEMENT

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBA I 402C	Supply Chain Management	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives

The objective of this course is to understand how the chain involved in the marketing and distribution is working and decide the routing and scheduling of the products.

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

1. Students having experience in the field of production can lean the techniques of materials and logistics management and implement them in their daily operations.
2. Provide a wider scope to the students interested in working in the manufacturing as well as shipping and retailing fields.

COURSE CONTENT

Unit I: Introduction to SCM

1. Importance of materials management
2. Codification, Simplification
3. Value analysis, Value engineering, Vendor analysis
4. Concepts and importance of a Supply Chain (SC)
5. Evolution of Supply Chain Management (SCM)
6. Key issues of Supply Chain Management, Competitive and SC strategies

Unit II: Dynamics of Supply Chain

1. Supply Chain Interventions
2. Push-based, Pull-based and Push-Pull based supply chain
3. Network design and Operations in the Supply Chain
4. Demand Forecasting in a Supply Chain
5. The value of information, Bullwhip effect, its Causes and remedial measures

Unit III: Managing inventory in SC environment

1. Basic and advanced inventory models
2. Multi-echelon inventory models

Unit IV: Transportation in SC environment

1. Design options for a transportation network
2. Strategic Outsourcing and Strategic Alliances
3. Third party and fourth party logistics

Unit V: Retailing and Supply Chain Management

1. Retailer- Supplier partnerships (RSP)
2. Supplier evaluation and selection
3. Information Technology (IT) in Supply Chain Management
4. SC performance model: SCOR model

Suggested Readings

1. Muthaiah, K. (2015). ***Logistics management and World Sea Borne Trade***. Mumbai; Himalaya Publishing House Ltd.
2. Aserkar, Rajiv (2007). ***Logistics in International Business***. Mumbai; Shroff Publication and Distribution Ltd.
3. Chopra, Sunil (2009). ***Supply Chain Management.*** New Delhi; Prentice Hall Publication.
4. Jaikrishna, S. ***Supply Chain Performance Management***. Hyderabad; ICFAI Unit Press.
5. Raghoramay, G. and Rangaraj, N. (2000). ***Logistics and Supply Chain Management***. New Delhi; MacMillan India Ltd.
6. Donald, Bowersok (2007). ***Logistics Management***. New Delhi; Tat McGraw Hill Publication.

Semester-IV

- MEME403 Energy Management
- MBAIEO407 Industrial Engineering
- MBAIEO405 Product Innovation And Planning
- MEME404 Infrastructure Management
- MBAIEO406 Total Productive Maintenance
- MBAIEO408 Strategic Technology Management

MEME403 ENERGY MANAGEMENT

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MEME 403	Energy Management	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objective

The aim of this course is to equip students with Energy Management concept and Legal provisions in Energy Management and its impact.

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

1. Understand various aspects of energy management.
2. Familiarize students with Energy Audit and analysis.

COURSE CONTENT

Unit I: Energy Scenario

1. Energy Scenario - global, sub continental and Indian
2. Energy economy relation, Future energy
3. Demand and supply scenario
4. Integrated energy planning with particular reference to Industrial Sector in India
5. Captive power units and others – demand v/s supply

Unit II: Physical Aspects of Energy

1. Classification of energy – Hydel, Thermal, Nuclear, Wind, & from Waste Products
2. Efficiency and effectiveness of energy utilization in Industry
3. Renewable and non-renewable energy

4. Conventional and unconventional energy

Unit III: Legal provisions in Energy Management and its impact

1. The Energy Conservation Act, 2003
2. The Electricity Act, 2003
3. National Electricity Policy
4. Rural Electrification.

Unit IV: Energy Demand Management

1. Energy utilization
2. Financial aspects of energy management
3. Energy management as a separate function and its place in plant management hierarchy
4. Energy Demand Management : Scope , Methodology, modes of energy savings
5. Plant energy and utility systems

Unit V: Energy Audit

1. Audit and analysis
2. Energy saving techniques and guidelines: Administrative control
3. Proper Measurement and monitoring system
4. Process control, proper planning and scheduling
5. Increasing capacity utilization
6. Improving equipment control, waste heat recovery
7. Change of energy source
8. Change of product specifications
9. Use of High efficiency equipment

Suggested Readings

1. Chakrabarty,A. (2011).***Energy Engineering and Management.*** New Delhi; PHI
2. Paul, W., Callaghan, O. (1993). ***Energy Management***, Europe; McGraw Hill Book Company.
3. Doty, S., Turner, W. C (2006). Energy ***Management Handbook.*** USA;Fairmont Press Inc.
4. Barny L.,Wainey C. (2003).***Guide to Energy Management.***USA; Fairmont Press Inc.
5. Ristinen, R., Kraushaar J. (2006). ***Energy and the Environment.*** New York; John Willey & Sons.

MBAIEO407 INDUSTRIAL ENGINEERING

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBAIE O 407	Industrial Engineering	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives

To understand different aspects like: Plant location and its selection, Plant layout within the plant. It also helps to understand and apply different concept of production planning and control. Study of productivity and Work-study are important tools, after studying it student are able to apply it in the industry for productivity improvement

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

1. Equip students with location decision and site selection
2. Understand plant layout knowledge for betterment of plant
3. Understand Production planning and control

COURSE CONTENT

UNIT: I Location Selection and Plant Layout

1. Nature of Location Decision
2. Importance of Plant Location
3. Choice of site for selection
4. Comparison of location
5. Principles of Plant layout and Types
6. factors affecting layout, methods

UNIT: II Production Planning and Control

1. Types of Production systems and their Characteristics

2. Functions and objectives of Production Planning and Control
3. Sales forecasting: Techniques and Applications
4. Steps of Production Planning and Control: Process planning

UNIT III: Productivity and Work Study

1. Definition of productivity
2. Application and advantages of productivity improvement tools
3. Reasons for increase and decreases in productivity
4. Areas of application of work study in industry
5. Reaction of management and labor to work study

UNIT IV: Job Evaluations and Wage Plan

1. Objective
2. Methods of job evaluation
3. Job evaluation procedure
4. Merit rating (Performance appraisal)
5. Method of merit rating
6. Wage and wage incentive plans

UNIT V: Industrial Legislation

1. Need for Industrial legislation
2. Factories act 1948
3. Industrial dispute act 1947
4. The Indian trade unions act 1926

Suggested Readings

1. Gavriel , Salvendy (2001). ***Handbook of industrial engineering: technology and operations management.*** UK; John Willey and Sons Inc.
2. Chakrabarty , Amlan (2011). ***Energy Engineering and Management***. New Delhi: PHI

MBAIEO405 PRODUCT INNOVATION AND PLANNING

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBAIE O405	Product Innovation and Planning	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives

The Objective of this course is to improve the understanding of and competence in making product-market choices, managing brands, and managing new product introduction. Explore the emerging concepts, techniques, and analytical approaches relevant to the above areas. The emphasis will be on the application of concepts and tools used in PPC for achieving efficiency and quality superiority.

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

1. Understand appropriate theoretical frameworks and models to evaluate product innovation situations and develop options and recommendations for new product investments.
2. Recognize the important relationship between marketing strategy choices and new product development decisions in an organization and apply these in new product choices.

COURSE CONTENT

UNIT I: Product strategy

1. Product strategy Proposed Product Planning Model-Setting Objectives
2. Monitoring the Environment, Situation Analysis
3. Development of a Product/Market Program
4. Product Mix Strategy
5. Analysis of product line and product mix decisions

UNIT II: Product Development

1. Idea generation
2. Concept and product development and evaluation
3. Business analysis
4. Characteristics of Successful Product Development
5. New Product Development Process and Organizations

UNIT III: Test Marketing

1. Testing products and other critical elements of marketing mix
2. Test Marketing Objectives, Limitations of Test Marketing
3. Design Consideration in Test Marketing
4. Alternatives to test Marketing Procedures, Product Launch Tracking, Relaunch
5. Test market planning, evaluation, and introduction strategies

UNIT IV: Capacity Planning

1. Capacity Planning
2. Integrated Production Planning and Control

UNIT V: Materials Planning and Control

1. Materials Planning and Control: Input Required for Materials Planning and Control
2. Steps in Materials Planning and Control
3. Techniques of Materials Planning and Control
4. Scientific Stock Control Techniques (Inventory Control Models)

Suggested Readings

1. Saaksvuori, Antti (2009). ***Product Lifecycle Management.*** UK; Wiley.
2. Chapman, Stephen. N (2007). ***Fundamentals of Production, Planning and Control.*** US; Pearson Publications.
3. Muhlemann, Alan (2007). ***Production and Operations Management. New*** Delhi; Pearson.
4. Shrivastava R. K. (2010). ***Product Management & New Product Development.*** Delhi; Excel Books.
5. Jhamb L.C (2001). ***Production Planning and Control.*** Pune; Everest Publications.
6. Sharma, Hari & Raghu, Rama (2000). ***Production Planning and Control Concepts and Application.*** New Delhi; Deep and Deep Publications.
7. Scott, Bill (1995). ***Manufacturing Planning System.*** London; McGraw-Hill Publications
8. Plossl ,George W & Licky's ,O. R. (1994). ***Materials Requirement Planning***. New York; McGraw-Hill Publications.

MEME404 INFRASTRUCTURE MANAGEMENT

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MEME 404	Infrastructure Management	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives

This main objective of this course is to create a well-rounded understanding of all relevant functionalities and operations of the industry, creating the ideal launch-pad for a successful career. It also gives understanding of emerging trends, main concepts and methodologies of infrastructure planning management.

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

1. Enhancing student's skills and understanding of diverse types of infrastructure assets planning and management, including the environmental, social, institutional assets
2. Understand Site management and site mobilization**.**

COURSE CONTENT

Unit I: Introduction to infrastructure

1. The basic principles of infrastructure planning
2. Condition assessment
3. Monitoring of the condition of the asset
4. Maintenance strategies
5. Funds requirement
6. Life cycle costing
7. Annual budgeting for maintenance and rehabilitation

Unit II: Site mobilizations

1. Site reconnaissance
2. Site layout including sizing and location of infrastructure
3. Organizing utilities
4. Mobilizing manpower
5. Materials, equipment, funds etc.

Unit III: Site management

1. Implementing
2. Performance accounting
3. Monitoring systems, waste
4. Prevention of malpractices
5. Networking with other parties

Unit IV: Welfare of Worker

1. Health and welfare of workers, women workers.
2. Project and the community.

Unit V: Demobilization

1. Testing, commissioning
2. Trial runs, final billing
3. Maintenance manuals and guarantees
4. Demobilization of men, materials, equipment's etc

Suggested Readings

1. Goodman,A. S. &Hastak,M (2006). ***Infrastructure planning handbook: Planning, engineering, and Economics.***New York; McGraw-Hill.
2. Parkin,J&Sharma, D (1999).***Infrastructure planning.*** London; Thomas Telford.
3. Chandra ,P (2009).***Projects: Planning, analysis, selection, financing, implementation, and review.*** New Delhi; Tata McGraw-Hill.
4. Finnerty,J. D (1996).***Project financing - Asset-based financial engineering.*** New York; John Wiley & Sons.
5. Squire, L&Tak, Van der (1975).***Economic analysis of projects.*** London;John Hopkins University Press.

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MBAIEO406 TOTAL PRODUCTIVE MAINTENANCE

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Assessment*	END SEM University Exam	Assessment*				
MBAIEO 406	Total Productive Maintenance	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives

1. To apprise the students of modern approaches in the field of maintenance.
2. To provide sufficient knowledge base pertaining to maintenance planning and Management in industries.
3. To provide better insight into the ongoing global trends, pertaining to maintenance management.
4. To provide knowledge and understanding of human participation in maintenance through TPM

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

1. Familiar with the history of maintenance management practices
2. Able to appreciate evolution and benefits of adopting the culture of TPM, and
3. In a position to understand TPM implementation steps.

COURSE CONTENT

Unit: I Introduction to Maintenance Management

1. Objectives and functions/ scope of Maintenance Management
2. Conventional types of maintenance – Breakdown or corrective maintenance, and Preventive Maintenance
3. Types of Preventive Maintenance models

4. Reliability, Availability and Maintainability
5. Maintenance cost

Unit: II Total Productive Maintenance Concepts

1. Stages of Maintenance Practices, from Preventive Maintenance to TPM
2. Productive Maintenance and Maintainability Improvement concepts
3. Definition and concepts of TPM
4. Five 'S'
5. TPM Small Group activities

Unit: III Implementing Total Productive Maintenance

1. Equipment Effectiveness and Six Big Losses, measures to overcome 'Six Big Losses'
2. Eight pillars of TPM
3. Autonomous maintenance: Fundamentals and features of Autonomous Maintenance, Activities of Production and Maintenance departments under TPM programme, 7-step procedure for implementing Autonomous Maintenance.
4. The twelve steps of TPM development

Unit: IV Other Aspects of Maintenance Management

1. Maintenance Cost
2. Spare parts management
3. Condition Monitoring and Condition Based/ Predictive Maintenance
4. Routine Maintenance planning and scheduling
5. Planning and scheduling of major maintenance projects

Suggested Readings

1. Nakajima , Seiichi (1992). ***Introduction to TPM.*** Chennai; Productivity Press.
2. Nakajima, Seiichi (1989). **TPM Development Programme – Implementing Total Productive Maintenance**. Chennai; Productivity Press
3. Gopalakrishnan, P & Banerji, A.K (1991). ***Maintenance and Spare Parts Management.*** New Delhi; Prentice – Hall of India Pvt. Ltd
4. Goto, F (1992). ***Equipment planning for TPM Maintenance Prevention Design.*** Chennai; Productivity Press.
5. Shirose, K (1992). ***Total Productive Maintenance for Workshop Leaders. Chennai;*** Productivity Press.
6. Shirose, K (1996). ***TPM for Operators. Chennai***; Productivity Press.
7. Suzuki, T (1993). ***New Directions for TPM. Chennai***; Productivity Press.

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MBAIEO408 STRATEGIC TECHNOLOGY MANAGEMENT

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBAIEO408	Strategic Technology Management	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives

The Objective of this course is provide the students exposure to the concepts of technology management, and technology management issues like technology development, acquisition, absorption, diffusion and technology support systems.

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

1. Familiarize the students with the concepts of technology management
2. Understand Generation, Development and Technology Transfer

COURSE CONTENT

Unit I: Introduction to Technology Management

1. Concept and Meaning of Technology and Technology Management
2. Evolution and Growth of Technology
3. Role and Significance of Technology Management
4. Impact of Technology on Society and Business
5. Technology and competition
6. Forms of Technology-Process technology; Product technology

Unit II: Technology Acquisition

1. Technology Acquisition
2. Alternatives for Acquiring New Technologies

3. Reasons Compelling a Company for Obtaining a New Technology
4. Management of Acquired Technology
5. Economy of scale or Scale economy
6. Levels of scale; the measurement of scale
7. Factors affecting the choice of scale

Unit III: Technology Forecasting

1. Concept of Technology Forecasting
2. Characteristics of technology forecasting
3. Technology forecast method
4. Principles of technology forecasting
5. Technology Forecasting Process
6. Need and Role of Technology Forecasting

Unit IV: Selection and Implementation of New Technologies

1. Automation Decisions
2. New Technologies
3. Selection of a New Technology
4. Implementation of New Technology
5. Automation and automation technology
6. Automation decisions

Unit V: Aspects and Issues in Technology Management

1. Technological Change- Characteristics of technological change
2. Classification of technological change
3. Impact of technological change
4. Technology Transformation
5. Technology and Socio-Economic Planning

Suggested Readings

- Tarek, Khalil (2009). ***Management of Technology.*** Delhi: Tata McGraw Hill.
- Burgelman, Robert (2009). ***Strategic Management of Technology & Innovation*** Boston: Tata McGraw Hill.
- Narayanan, V.K (2010). ***Managing Technology and Innovation for Competitive Advantage*****:** New Delhi: Pearson.
- White, Margaret A (2008). ***The management of Technology and Innovation*** Boston: Cengage Learning.
- Frenzel,C & Frenzel,J (2008). ***Management of information Technology.*** Boston: Cengage Learning.
- Tidd, Joe (2006).***Managing Innovation:Integrating Technological Market and Organizational Change.*** Australia: John Wiley& Sons.
- Drucker, Peter F (2010). ***Technology Management and Society.*** London: Pam Books
- Schilling, Melissa A. (2016).***Strategic Management of Technological Innovation.*** Europe; McGraw-Hill.