

AMIE27 TECHNOLOGY MANAGEMENT

UNIT-1 INTRODUCTION TO TECHNOLOGY MANAGEMENT:

Concept and Meaning of Technology and Technology Management- Technology; Technology management, Evolution and Growth of Technology, Role and Significance of Technology Management, Impact of Technology on Society and Business- Technology and competition; Key issues in managing technological innovation, Forms of Technology- Process technology; Product technology

UNIT-2 TECHNOLOGY ACQUISITION

Technology Acquisition, Alternatives for Acquiring New Technologies, Reasons Compelling a Company for Obtaining a New Technology, Management of Acquired Technology, Measures of Scale and Mechanisms for Acquiring Technologies- Economy of scale or Scale economy; Levels of scale; The measurement of scale; Factors affecting the choice of scale

UNIT-3 TECHNOLOGY FORECASTING

Concept of Technology Forecasting- Characteristics of technology forecasting ; Technology forecast method; Principles of technology forecasting, Technology Forecasting Process, Need and Role of Technology Forecasting, Forecasting Methods and Techniques, Planning and Forecasting

UNIT-4 TECHNOLOGY STRATEGY AND COMPETITIVENESS

Technology Strategy-Technology strategy and management; Elements of an accessible technology strategy, Innovation Management, Competitive Advantage- Components of competitive advantage; Creating competitive advantage using value chain, Technology Management Evaluation or Assessment

UNIT-5 TECHNOLOGY ADOPTION, DIFFUSION, AND ABSORPTION:

Technology Adoption, Technology Diffusion- of technology diffusion; Perspectives of innovation diffusion process; Activities necessary for diffusion process, Technology Absorption- Role of technology absorption; Benefits of technology absorption; Constraints in technology absorption, Technology Package and Technological Dependence, Indian Experience in Technology Absorption Efforts, Issues Involved in the Management of Technology Absorption and Government Initiatives

UNIT-6 SELECTION AND IMPLEMENTATION OF NEW TECHNOLOGIES- AUTOMATION DECISIONS

New Technologies, Selection of a New Technology, Implementation of New Technology, Automation- Automation and automation technology; Automation decisions

UNIT-7ASPECTS AND ISSUES IN TECHNOLOGY MANAGEMENT

Technological Change- Characteristics of technological change; Classification of technological change; Impact of technological change, Technology Life Cycle, Technology Transformation,

Technology Policies and Policy Instruments, Technological Development Options and Strategies, Technology and Socio-Economic Planning, Diffusion and Growth of Technologies- Information technology revolution; Macro effects of technological change

UNIT-8 TECHNOLOGY GENERATION AND DEVELOPMENT:

Technology Generation- Process; , Technology Development, Importance of Technology Generation and Development, Need for Technology Strategy, Importance of Research and Development (R&D)- Corporate research and product lifetimes; Production costs and R&D; Translation of R & D efforts to technology

UNIT-9 TECHNOLOGY TRANSFER

Transfer of Technology, Models of Technology Transfer- Traditional technology transfer models; Qualitative technology transfer models, Technology Transfer Modes, Dimensions of Technology Transfer, Features of Technology Package, Routes of Technology Transfer

UNIT-10 TECHNOLOGY ASSESSMENT

Technology Choice, Technology Assessment Process, Technology Leadership and Followership, Technology Concepts- Technology acquisition; Meaning of innovation and creativity; Innovation management

UNIT-11 MANAGING TECHNOLOGY BASED INNOVATION

Innovation and Technology- Innovation – Technology relationship; Technological innovation and management, Process of Technology - Based Innovation, Measures of Innovative Performance, Characteristics of Innovative Work Environment, Key Areas of Management Focus for Productive Innovation, Measures for Building High-Performing Innovative Technology- Based Organisations.

UNIT-12 PRODUCT TECHNOLOGY

Product Development, Role of Government in Technology Management, Technology Development and Competition, Managing Research & Development (R & D), Intellectual Property Management

UNIT-13 KNOWLEDGE BASED TECHNOLOGIES AND KNOWLEDGE MANAGEMENT

Knowledge Based Technology and Techniques - Knowledge based technology process; Tools and techniques, Role of Artificial Intelligence Techniques, Knowledge Management Techniques for Technology Management

UNIT-14 HUMAN ASPECTS IN TECHNOLOGY MANAGEMENT

Integration of People and Technology, Factors Considered in Technology Management- Organisational factors; Psychological factors, Organisational Structure and Technology

UNIT-15 SOCIAL ISSUES IN TECHNOLOGY MANAGEMENT

Social Issues, Technological Change and Industrial Relations- Implementation of rationalization and automation in India; Impact of technological change, Technology Assessment and Environmental Impact Analysis- Environmental impact analysis process- Guidelines on the scope of EIA; Issues in preparation of EIA report; Elements of the environmental problem

Reference Books:

1. “Essentials Of Information Technology As Per Cce Guidelines Vol 2, Pb” by Sharma V
2. “The Essentials of Information Technology Class – 9: As Per CCE” by Vaishali Sharma

