

# **AMAC-26 MANAGEMENT OF TECHNOLOGY**

## **UNIT-1 NATURE OF ORGANIZATION**

Introduction, objectives, the need for corporate objectives, the mission statement, managing by objectives, the legal establishment of organizations. Companies, franchising, strategies for survival, strategic marketing, simultaneous engineering, manufacturing strategies

## **UNIT-2 FUNCTIONS OF ORGANIZATION**

objectives, purchasing, the role of the purchasing function, organization of the purchasing function, activities in purchasing, management activities in the operations area, organization of manufacturing, market research, customers and markets, sales, finance, organization of the finance department, Activities of the finance department, product development, Activities of the product development function, organization of the product development function, research , quality, quality systems, management activities in the quality function.

## **UNIT-3 PRODUCT DEVELOPMENT**

Customer and product development, product life cycles and gap analysis, gap analysis, the ideal product development process, managing the product development process, models of the process, pugh, pahl and beitz, company structure for product development, research, development, engineering and manufacturing (rdem), project approach, matrix, finance and product development, management techniques in product development, identifying customer needs, product design specification (pds).

## **UNIT-4 OPERATIONS MANAGEMENT**

Organization of manufacturing, job production, batch production, flow production, group technology, production planning and control, part specifications., product data, economic batch quantity, the schedules, materials management, purchasing, centralization and decentralization of purchase department, purchasing procedure, stores, material requirement planning (mrp), terms used in material requirements planning., dependent demand, lumpy demand, lead time, how mrp uses lead time information, master production schedule (mps), bill of material (bom) file, inventory status file., output of mrp, benefits of mrp, drawbacks of mrp, just in time (jit) in production system, push system vs pull system, kanban and pull system, calculation for number of kanban, an analogy to jit, requirements for implementing jit, preliminaries to jit production, jit production process, evaluation of jit production.

## **UNIT-5 QUALITY MANAGEMENT**

Inspection and test, quality control, quality assurance and iso 9000, total quality management (tqm), what is quality, dimensions of quality, total quality management (tqm), quality gurus, deming's approach to tqm, joseph m. Juran, principal objectives of tqm principal objectives of tqm, management in tqm, elements of tqm, Customer satisfaction evaluation, seven qc tools for improvement, implementation of tqm, iso 9000, iso 9000 vs tqm, standards indian standard institution, bis publications.

## **UNIT-6 PROJECT PLANNING AND MANAGEMENT**

Introduction, objectives, projects and management, network analysis, finding the critical path, project float, gantt charts, resource analysis, planning under uncertainty

## **UNIT-7 PERSONNEL MANAGEMENT**

Structure of organizations, methods of company organization, deployment of personnel, factors that affect company organization, product and manufacturing system, functions and expertise, definition of personnel management, principles of personnel management, functions of personnel management, recruitment and selection of employees manpower planning, types of manpower planning, steps in manpower planning, procedure of appointing an employee in a factory, training and development, organisation of training programme, principles of training, method of training operating employees, methods of training foreman and supervisors, methods of training executives or managerial executive development.

## **UNIT-8 TEAM WORKING AND CREATIVITY**

Team working, holistic teams, group dynamics, the needs of the group, meeting these needs – group dynamics, norms, group culture, managing the creative process., planning innovation, planning techniques for the innovative process, problem solving, brainstorming., decision making, start with objectives

## **UNIT-9 COMMUNICATION SKILL**

Communication in the workplace, the purpose of a communication system., communication methods and aids., information gathering, sources of information, assimilation and organizing information, written communication, factor affecting written communication, preparation of creative writing, specific writing techniques, using a computer for written communication, oral communications, factors that affect oral communications, active listening, oral presentations, making the presentation, interviews, negotiations, the telephone, managing meetings

### **Reference books:**

1. Management of Technology and Innovation, Competing Through Technological Excellence, second edition by P N Rastogi - Indian Institute of Management, Lucknow, India
2. STRATEGIC MANAGEMENT OF TECHNOLOGY and INNOVATION by Robert Burgelman and Clayton Christensen