Th1. ENTREPRENEURSHIP and MANAGEMENT & SMART TECHNOLOGY
(Common to all Branches)

Theory	4 Periods per week	Internal Assessment	20 Marks
Total Periods	60 Periods	End Sem Exam	80 Marks
Examination	3hours	Total Marks	100Marks

Topic Wise Distribution of Periods

Sl No.	Topic	Periods
1	Entrepreneurship	10
2	Market Survey and Opportunity Identification(Business Planning)	8
3	Project report Preparation	4
4	Management Principles	5
5	Functional Areas of Management	10
6	Leadership and Motivation	6
7	Work Culture, TQM & Safety	5
8	Legislation	6
9	Smart Technology	6
	TOTAL	60

RATIONALE

In the present day scenario, it has become imperative to impart entrepreneurship and management concepts to students, so that a significant percentage of them can be directed towards setting up and managing their own small enterprises. It may be further added that an entrepreneurial mind set with managerial skill helps the student in the job market. The students can also be introduced with Startup and Smart Technology concept, which shall radically change the working environment in the coming days in the face of Industry 4.0
In this subject, the Students shall be introduced/ exposed to different concepts and Terminologies in brief only, so that he/she can have broad idea about different concepts/items taught in this subject. Solving numerical problem on any topic/item is beyond the scope of this subject.

OBJECTIVES

After undergoing this course, the students will be able to :
- Know about Entrepreneurship, Types of Industries and Startups
- Know about various schemes of assistance by entrepreneurial support agencies
- Conduct market survey
- Prepare project report
- know the management Principles and functional areas of management
- Inculcate leadership qualities to motivate self and others.
- Maintain and be a part of healthy work culture in an organisation.
- Use modern concepts like TQM
- Know the General Safety Rules
- Know about IOT and its Application in SMART Environment.

DETAILED CONTENTS

1. **Entrepreneurship**
    - Concept /Meaning of Entrepreneurship
    - Need of Entrepreneurship
    - Characteristics, Qualities and Types of entrepreneur, Functions
    - Barriers in entrepreneurship
    - Entrepreneurs vrs. Manager
    - Forms of Business Ownership: Sole proprietorship, partnership forms and others

2

- Types of Industries, Concept of Start-ups
- Entrepreneurial support agencies at National, State, District Level(Sources): DIC, NSIC,OSIC, SIDBI, NABARD, Commercial Banks, KVIC etc.
- Technology Business Incubators (TBI) and Science and Technology Entrepreneur Parks

2. **Market Survey and Opportunity Identification (Business Planning)**

- Business Planning
- SSI, Ancillary Units, Tiny Units, Service sector Units
- Time schedule Plan, Agencies to be contacted for Project Implementation
- Assessment of Demand and supply and Potential areas of Growth
- Identifying Business Opportunity
- Final Product selection

3. **Project report Preparation**

- Preliminary project report
- Detailed project report, Techno economic Feasibility
- Project Viability

4. **Management Principles**
- Definitions of management
- Principles of management
- Functions of management (planning, organising, staffing, directing and controlling etc.)
- Level of Management in an Organisation

5. **Functional Areas of Management**
   a) Production management
      - Functions, Activities
      - Productivity
      - Quality control
      - Production Planning and control
   b) Inventory Management
      - Need for Inventory management
      - Models/Techniques of Inventory management
   c) Financial Management
      - Functions of Financial management
      - Management of Working capital
      - Costing (only concept)
      - Break even Analysis
      - Brief idea about Accounting Terminologies: Book Keeping, Journal entry, Petty Cash book, P&L Accounts, Balance Sheets(only Concepts)
   d) Marketing Management
      - Concept of Marketing and Marketing Management
      - Marketing Techniques (only concepts)
      - Concept of 4P s (Price, Place, Product, Promotion)
   e) Human Resource Management
   - Functions of Personnel Management
   - Manpower Planning, Recruitment, Sources of manpower, Selection process, Method of Testing, Methods of Training & Development, Payment of Wages

6. **Leadership and Motivation**
   a) Leadership
   - Definition and Need/Importance
   - Qualities and functions of a leader

- Manager Vs Leader
- Style of Leadership (Autocratic, Democratic, Participative)
  b) Motivation
     - Definition and characteristics
     - Importance of motivation
     - Factors affecting motivation
     - Theories of motivation (Maslow)
     - Methods of Improving Motivation
     - Importance of Communication in Business
     - Types and Barriers of Communication

7. **Work Culture, TQM & Safety**
   - Human relationship and Performance in Organization
   - Relations with Peers, Superiors and Subordinates
   - TQM concepts: Quality Policy, Quality Management, Quality system
   - Accidents and Safety, Cause, preventive measures, General Safety Rules , Personal Protection Equipment(PPE)

8. **Legislation**
   a) Intellectual Property Rights(IPR), Patents, Trademarks, Copyrights
   b) Features of Factories Act 1948 with Amendment (only salient points)
   c) Features of Payment of Wages Act 1936 (only salient points)

9. **Smart Technology**
   - Concept of IOT, How IOT works
   - Components of IOT, Characteristics of IOT, Categories of IOT
   - Applications of IOT- Smart Cities, Smart Transportation, Smart Home, Smart Healthcare, Smart Industry, Smart Agriculture, Smart Energy Management etc.

Syllabus to be covered before IA: Chapter 1,2,3,4

RECOMMENDED BOOKS

1. Entrepreneurship Development and Management by R.K Singhal, Katson Books., New Delhi
2. Entrepreneurship Development and Management by U Saroj and V Mahendiratta, Abhishek Publications, Chandigarh
3. Entrepreneurship Development and Management by Vasant Desai, Himalaya Pub.House
4. Industrial Engineering and Management by O.P Khanna ,Dhanpat Rai and Sons
5. Industrial Engineering and Management by Banga and Sharma, Khanna Publications
6. Internet of Things by Jeeva Jose, Khanna Publications, New Delhi
7. Online Resource on Startups and other concepts
8. https://www.fundable.com/learn/resources/guides/startup