

JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA

Department of Civil Engineering

Name of the Faculty: AMIT KUMAR SAHU

Entrepreneurship and Management & Smart Technology

Theory: 4 Periods Per Week

Internal Assessment: 20 Marks

Total Periods: 60 Periods

End Sem Exam: 80 Marks

Examination: 3 Hours

Total Marks: 100 Marks

Semester: 5th Civil


Session: WINTER 2025

Discipline: Civil	Semester: 5 th	
Subject: Entrepreneurship and Management & Smart Technology	No. of Days/per week class allotted: 04 Days	No. of Weeks: 15
Weeks	Class Day	Theory Topics
1 st	1 st	1. Entrepreneurship Concept /Meaning of Entrepreneurship and Need of Entrepreneurship
	2 nd	Characteristics, Qualities and Types of entrepreneurs
	3 rd	Functions and Barriers in entrepreneurship
	4 th	Entrepreneurs vs. Manager
2 nd	1 st	Forms of Business Ownership: Sole proprietorship, partnership forms and others
	2 nd	Types of Industries
	3 rd	Concept of Start-ups
	4 th	Entrepreneurial support agencies at National, State, District Level (Sources): DIC, NSIC, OSIC
3 rd	1 st	SIDBI, NABARD, Commercial Banks, KVIC etc.
	2 nd	Technology Business Incubators (TBI) and Science and Technology Entrepreneur Parks
	3 rd	2. Market Survey and Opportunity Identification (Business Planning) Business Planning.

	4 th	SSI, Ancillary Units, Tiny Units
4 th	1 st	Service sector Units, Time schedule Plan
	2 nd	Agencies to be contacted for Project Implementation
	3 rd	Assessment of Demand and supply
	4 th	Potential areas of Growth of Demand and supply
5 th	1 st	Identifying Business Opportunity
	2 nd	Final Product selection
	3 rd	3. Project report Preparation Preliminary project report
	4 th	Detailed project report
6 th	1 st	Techno economic Feasibility
	2 nd	Project Viability
	3 rd	4. Management Principles Definitions of management and importance of management
	4 th	Principles of management
7 th	1 st	Principles of management Functions of management (planning, organizing)
	2 nd	Functions of management (staffing, directing, leadership, motivating, Communicating and controlling etc.)
	3 rd	Level of Management in an Organisation
	4 th	5. Functional Areas of Management Production management (Function and Activities), Productivity, Quality control.
8 th	1 st	Production Planning and control, Inventory Management - Need and techniques of Inventory management.
	2 nd	Financial Management, Functions of Financial management, Management of Working capital.
	3 rd	Costing (only concept), Break even Analysis, Brief idea about Accounting Terminologies: Book Keeping, Journal entry
	4 th	Petty Cash book, P&L Accounts, Balance Sheets.
9 th	1 st	Concept of Marketing and Marketing Management and its techniques.

	2 nd	Concept of 4P s (Price, Place, Product, Promotion), Human Resource Management.
	3 rd	Functions of Personnel Management, Manpower Planning, Recruitment, Sources of manpower.
	4 th	Sources of manpower, Selection process, Method of Testing.
10 th	1 st	Methods of Training & Development, Payment of Wages.
	2 nd	6. Leadership and Motivation Leadership (Definition and Need/Importance), Qualities and functions of a leader.
	3 rd	Manager Vs Leader, Style of Leadership (Autocratic, Democratic, Participative)
	4 th	Motivation (Definition and characteristics), Importance of motivation.
11 th	1 st	Factors affecting motivation, Theories of motivation (Maslow).
	2 nd	Methods of Improving Motivation, Importance of Communication in Business.
	3 rd	Types and Barriers of Communication.
	4 th	7. Work Culture, TQM & Safety Human relationship and Performance in Organization.
12 th	1 st	Relations with Peers, Superiors and Subordinates. TQM concepts: Quality Policy
	2 nd	TQM concepts: Quality Management, Quality system, QMS
	3 rd	Accidents and Safety, Cause, preventive measures
	4 th	General Safety Rules, Personal Protection Equipment (PPE)
13 th	1 st	8. Legislation Intellectual Property Rights (IPR), Patents
	2 nd	Trademarks
	3 rd	Copyrights
	4 th	Describes the factories Act 1948
14 th	1 st	Features of Factories Act 1948 with Amendment (only salient points)
	2 nd	Features of Payment of Wages Act 1936 (only salient points)

	3 rd	9. Smart Technology Concept of IOT, How IOT works
	4 th	Components of IOT
15 th	1 st	Characteristics of IOT, Categories of IOT
	2 nd	Applications of IOT- Smart Cities, Smart Transportation
	3 rd	Smart Home, Smart Healthcare, Smart Industry
	4 th	Smart Agriculture, Smart Energy Management etc.


 14/11/2025
 (Amit Kumar Sahu)
 (Elect Eng)