

# JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA

## Department of Civil Engineering

Name of the Faculty: AMIT KUMAR SAHU  
JYOTSHNA RANI RAUTA

### 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: 5<sup>th</sup> Civil

Session-WINTER-2024

Discipline: <b>Civil</b>	Semester: <b>5<sup>th</sup></b>	
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 <sup>st</sup>	1 <sup>st</sup>	<b>1. Entrepreneurship</b> Concept /Meaning of Entrepreneurship and Need of Entrepreneurship
	2 <sup>nd</sup>	Characteristics, Qualities and Types of entrepreneurs
	3 <sup>rd</sup>	Functions and Barriers in entrepreneurship
	4 <sup>th</sup>	Entrepreneurs vs. Manager
2 <sup>nd</sup>	1 <sup>st</sup>	Forms of Business Ownership: Sole proprietorship, partnership forms and others
	2 <sup>nd</sup>	Types of Industries
	3 <sup>rd</sup>	Concept of Start-ups
	4 <sup>th</sup>	Entrepreneurial support agencies at National, State, District Level (Sources): DIC, NSIC, OSIC
3 <sup>rd</sup>	1 <sup>st</sup>	SIDBI, NABARD, Commercial Banks, KVIC etc.
	2 <sup>nd</sup>	Technology Business Incubators (TBI) and Science and Technology Entrepreneur Parks
	3 <sup>rd</sup>	<b>2. Market Survey and Opportunity Identification (Business Planning)</b> Business Planning.

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

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

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

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21/07/2024