**COURSE NAME: DIPLOMA IN ENGINEERING (All Branches)** 

COURSE CODE: EJ/EN/ET/EX/EV/IC/IE/IS/MU/DE/ME/PG/PT/AE/CE/CS/CR/CO/

CM/IF/EE/EP/CH/CT/PS/CD/EDEI/CV/FE/IU/MH/MI

SEMESTER: FIFTH FOR EJ/EN/ET/EX/EV/IC/IE/IS/MU/DE/ME/PG/PT/AE/CE/

CS/CR/ CO/CM/IF/EE/EP/CH/CT/PS/CD/ED/EI/CV AND SEVENTH

FOR MH/MI/FE/IU

**SUBJECT TITLE: MANAGEMENT** 

**SUBJECT CODE:** 

# **Teaching and Examination Scheme:**

Teaching Scheme		Examination Scheme						
TH	TU	PR	PAPER	TH	PR	OR	TW	TOTAL
			HRS					
03			03	100			-	100

## **Rationale:**

Management concepts are universal and it is a multidisciplinary subject. They are equally applicable to different types industries like Manufacturing, Service and Trade as well as different kind of business activities like industry, army, school, hospital, retail shops etc. Also, at the end of diploma course polytechnic students are expected to enter in to the Industrial Environment. This environment is altogether different and new to the students. A proper introduction and understanding of management fundamentals is therefore essential for all these students.

Contents of the this subject will enable the students to address various issues related to human resource, finance, materials, legislations etc. by use of basic principles of management. This will ensure that students will play their role effectively to enhance the quality of business output in total.

# **General Objective:**

The students will able to:

- 1. Get familiarized with environment related to business processes.
- 2. Know the management aspects of the organisations.
- 3. Understand Role & Responsibilities of a Diploma engineer.
- 4. Understand importance of quality improvement techniques.
- 5. Appreciate need and importance of safety in industries
- 6. Understand process of Industrial finance and its management
- 7. Know the latest trends in industrial management

# Learning Structure:

# Application

- Use management functions & techniques.
- Realize importance of management process in Business.
- Describe Business Scenario.

- Practice managerial traits.
- Know supervisory responsibilities, time management & productivity

## Procedure

- Exposure to world of work
- Information collection regarding government functions, rules and regulations, regarding Business processes.
- Case studies of management functions.
- Review of Supervisory responsibilities
- Time Management functions
- Learning to learn management functions

# Concepts

- Globalization & WTO
- Modern methods of management
- Value addition by efficient management.
- Roll of supervisor
- Managerial Traits
- Government Rules & Regulations and their implications.

# Facts

- Conventional Engineering & Business opportunities
- Changing Role & nature of employment.
- Developments in functions of Business Management.
- Role and Opportunity for technicians in Business world.
- Responsibilities & Expectations from Technicians in Business Environment.

# **Contents: Theory**

Topic and contents	Hour s	Marks
Topic 1 Overview Of Business		
Specific Objectives		
> State various business types and sectors		
<ul><li>Describe importance of globalisation</li></ul>		
1.1. Types of Business		
Service		
· Manufacturing		
· Trade		
1.2. Industrial sectors Introduction to	02	06
· Engineering industry		
· Process industry		
· Textile industry		
· Chemical industry		
· Agro industry		
· IT industry		
-Banking, Insurance, Retail, Hospitality, Health Care		
1.3 Globalization		
· Introduction		
· Advantages & disadvantages w.r.t. India		
<b>Topic 2 Management Process</b>	08	16
Specific Objectives		
<ul><li>State various management principles</li></ul>		
Describe different management functions		
2.1 What is Management?		
· Evolution		
· Various definitions of management		
· Concept of management		
· Levels of management		
· Administration & management		
Scientific management by F.W.Taylor Marks 04		
2.2 Principles of Management (14 principles of Henry Fayol) Marks 04		
2.3 Functions of Management		
· Planning		
· Organizing		
· Directing		
· Controlling		
Decision Making Marks 08		
Decision waking water		
Topic 3 Organisational management	08	16
Specific Objectives		
Compare different forms of organisation, ownership for a		
specific business		
Describe types of departmentation		

3.1 Organization :-			
· Definition			
	Marks		
· Steps in organization 02	Marks		
3.2 Types of organization			
· Line			
· Line & staff			
· Functional			
	Marks 04		
	Marks 04		
3.3 Departmentation			
· By product			
· By process			
By function			
3.4 Principles of Organisation			
Authority & Responsibility			
Span of Control			
· Effective Delegation			
Balance ,stability and flexibility			
	Marks 04		
3.5 Forms of ownership			
Proprietorship			
· Partnership			
· Joint stock			
· Co-operative Society			
· Govt. Sector	Marks 06		
Topic 4 Industrial Safety and Legislative acts		08	14
Specific Objectives			
Describe types of accidents & safety measures			
> State provisions of industrial acts.			
4.1 Safety Management			
Course of assidents			
· Causes of accidents			
· Types of Industrial Accidents			
<ul><li> Types of Industrial Accidents</li><li> Preventive measures</li></ul>			
<ul><li> Types of Industrial Accidents</li><li> Preventive measures</li><li> Safety procedures</li></ul>	Marks 08		
<ul> <li>Types of Industrial Accidents</li> <li>Preventive measures</li> <li>Safety procedures</li> <li>4.2 Industrial Legislation – Necessity of Acts</li> </ul>	Marks 08		
<ul> <li>Types of Industrial Accidents</li> <li>Preventive measures</li> <li>Safety procedures</li> <li>4.2 Industrial Legislation – Necessity of Acts</li> <li>Important Definitions &amp; Main Provisions of following acts:</li> </ul>	Marks 08		
<ul> <li>Types of Industrial Accidents</li> <li>Preventive measures</li> <li>Safety procedures</li> <li>4.2 Industrial Legislation – Necessity of Acts</li> <li>Important Definitions &amp; Main Provisions of following acts:</li> <li>Indian Factory Act</li> </ul>	Marks 08		
<ul> <li>Types of Industrial Accidents</li> <li>Preventive measures</li> <li>Safety procedures</li> <li>4.2 Industrial Legislation – Necessity of Acts</li> <li>Important Definitions &amp; Main Provisions of following acts: <ul> <li>Indian Factory Act</li> <li>Workman Compensation Act</li> </ul> </li> </ul>			
<ul> <li>Types of Industrial Accidents</li> <li>Preventive measures</li> <li>Safety procedures</li> <li>4.2 Industrial Legislation – Necessity of Acts</li> <li>Important Definitions &amp; Main Provisions of following acts:</li> <li>Indian Factory Act</li> </ul>	Marks 08 Marks		
<ul> <li>Types of Industrial Accidents</li> <li>Preventive measures</li> <li>Safety procedures</li> <li>4.2 Industrial Legislation – Necessity of Acts</li> <li>Important Definitions &amp; Main Provisions of following acts: <ul> <li>Indian Factory Act</li> <li>Workman Compensation Act</li> </ul> </li> </ul>			
<ul> <li>Types of Industrial Accidents</li> <li>Preventive measures</li> <li>Safety procedures</li> <li>4.2 Industrial Legislation – Necessity of Acts</li> <li>Important Definitions &amp; Main Provisions of following acts: <ul> <li>Indian Factory Act</li> <li>Workman Compensation Act</li> <li>Minimum Wages Act</li> </ul> </li> <li>06</li> </ul>			
<ul> <li>Types of Industrial Accidents</li> <li>Preventive measures</li> <li>Safety procedures</li> <li>4.2 Industrial Legislation – Necessity of Acts</li> <li>Important Definitions &amp; Main Provisions of following acts: <ul> <li>Indian Factory Act</li> <li>Workman Compensation Act</li> <li>Minimum Wages Act</li> </ul> </li> <li>Topic 5 Financial Management (No numerical)</li> </ul>		08	16
<ul> <li>Types of Industrial Accidents</li> <li>Preventive measures</li> <li>Safety procedures</li> <li>4.2 Industrial Legislation – Necessity of Acts</li> <li>Important Definitions &amp; Main Provisions of following acts: <ul> <li>Indian Factory Act</li> <li>Workman Compensation Act</li> <li>Minimum Wages Act</li> </ul> </li> <li>Topic 5 Financial Management (No numerical)</li> <li>Specific Objectives</li> </ul>		08	16
<ul> <li>Types of Industrial Accidents</li> <li>Preventive measures</li> <li>Safety procedures</li> <li>Industrial Legislation – Necessity of Acts</li> <li>Important Definitions &amp; Main Provisions of following acts:         <ul> <li>Indian Factory Act</li> <li>Workman Compensation Act</li> <li>Minimum Wages Act</li> </ul> </li> <li>Topic 5 Financial Management (No numerical)</li> <li>Specific Objectives</li> <li>Explain functions of financial management</li> </ul>		08	16
<ul> <li>Types of Industrial Accidents</li> <li>Preventive measures</li> <li>Safety procedures</li> <li>Industrial Legislation – Necessity of Acts</li> <li>Important Definitions &amp; Main Provisions of following acts:         <ul> <li>Indian Factory Act</li> <li>Workman Compensation Act</li> <li>Minimum Wages Act</li> <li>06</li> </ul> </li> <li>Topic 5 Financial Management (No numerical)</li> <li>Specific Objectives         <ul> <li>Explain functions of financial management</li> <li>State the sources of finance &amp; types of budgets.</li> </ul> </li> </ul>		08	16
<ul> <li>Types of Industrial Accidents</li> <li>Preventive measures</li> <li>Safety procedures</li> <li>Industrial Legislation – Necessity of Acts</li> <li>Important Definitions &amp; Main Provisions of following acts:         <ul> <li>Indian Factory Act</li> <li>Workman Compensation Act</li> <li>Minimum Wages Act</li> <li>06</li> </ul> </li> <li>Topic 5 Financial Management (No numerical)</li> <li>Specific Objectives         <ul> <li>Explain functions of financial management</li> <li>State the sources of finance &amp; types of budgets.</li> <li>Describe concepts of direct &amp; indirect taxes.</li> </ul> </li> </ul>	Marks	08	16
<ul> <li>Types of Industrial Accidents         <ul> <li>Preventive measures</li> <li>Safety procedures</li> </ul> </li> <li>4.2 Industrial Legislation – Necessity of Acts         <ul> <li>Important Definitions &amp; Main Provisions of following acts:                 <ul> <li>Indian Factory Act</li> <li>Workman Compensation Act</li> <li>Minimum Wages Act</li> <li>06</li> </ul> </li> </ul> </li> <li>Topic 5 Financial Management (No numerical)</li> <li>Specific Objectives         <ul> <li>Explain functions of financial management</li> <li>State the sources of finance &amp; types of budgets.</li> <li>Describe concepts of direct &amp; indirect taxes.</li> </ul> </li> <li>Financial Management- Objectives &amp; Functions</li> </ul>		08	16
<ul> <li>Types of Industrial Accidents</li> <li>Preventive measures</li> <li>Safety procedures</li> <li>Industrial Legislation – Necessity of Acts</li> <li>Important Definitions &amp; Main Provisions of following acts:         <ul> <li>Indian Factory Act</li> <li>Workman Compensation Act</li> <li>Minimum Wages Act</li> <li>06</li> </ul> </li> <li>Topic 5 Financial Management (No numerical)</li> <li>Specific Objectives         <ul> <li>Explain functions of financial management</li> <li>State the sources of finance &amp; types of budgets.</li> <li>Describe concepts of direct &amp; indirect taxes.</li> </ul> </li> </ul>	Marks	08	16

· Sources of raising Capital – Features of Short term, Medium		
Term & Long Term Sources Marks 0	4	
5.3. Budgets and accounts		
· Types of Budgets		
Fixed & Variable Budget - Concept		
<u> </u>		
Production Budget – Sample format		
· Labour Budget – Sample format		
Profit & Loss Account & Balance Sheet – Meaning, sample		
format, meaning of different terms involved. Marks 0	6	
5.4 Meaning & Examples of –		
· Excise Tax		
· Service Tax		
· Income Tax		
· Value Added Tax		
	0.4	
· Custom Duty Marks (	04	
Topic 6 Materials Management (No Numerical)		
	08	16
Specific Objectives		
Describe concept of inventory, ABC analysis & EOQ.		
Describe purchase functions & procedures  Describe purchase functions & procedures		
1		
State features of ERP & MRP		
6.1. Inventory Concept, its classification, functions of inventory	_	
Marks 0		
6.2 ABC Analysis – Necessity & Steps Marks (	04	
6.3 Economic Order Quantity Concept, graphical representation,		
determination of EOQ Marks 04	4	
6.4 Standard steps in Purchasing Marks 0	2	
6.5 Modern Techniques of Material Management		
· Material Resource Planning (MRP) – Functions of MRP, Inpu	t	
to MRP, Benefits of MRP		
·	N.G.	
Enterprise Resource Planning (ERP) – Concept, list of module	-	
advantages & disadvantages of ERP Marks 04		
Topic 7 Quality Management	06	16
Specific Objectives		
<ul><li>State Principles of Quality Management</li></ul>		
<ul> <li>Describe Modern Technique &amp; Systems of Quality</li> </ul>		
Management		
7.1Meaning of Quality		
Quality Management System – Activities, Benefits		
Quality Control –Objectives, Functions, Advantages		
Quality Circle – Concept, Characteristics & Objectives		
Quality Assurance – Concept, Quality Assurance System Marks (	$_{\rm M}$	
	/ <del>-</del>	
7.2 Meaning of Total Quality and TQM	,	
Components of TQM – Concept, Elements of TQM, Benefits Marks (	J4	
7.3 Modern Technique & Systems of Quality Management like		
Kaizen,5'S',6 Sigma Marks (	)4	
7.4 ISO 9001:2000 – Benefits, Main clauses. Marks	04	
TOTAL	48	100

# **Learning Resources: Books:**

Sr.	Author	Name of Book	Publisher
No			
01	Dr. O.P. Khanna	Industrial Engineering & Management	Dhanpat Rai & sons New Delhi
02	Banga & Sharma	Industrial Engineering & Management	Khanna Publication
03	Dr. S.C. Saksena	Business Administration & Management	Sahitya Bhavan Agra
04	W.H. Newman E.Kirby Warren Andrew R. McGill	The process of Management	Prentice- Hall

E Source :

nptel.iitm.ac.in http://iete-elan.ac.in/subjects/amIndustrialMgmt.htm