

<b>Discipline:</b> Mechanical Engineering	<b>Semester :</b> 6 <sup>th</sup> Semester-2020-21	<b>Name of the Teaching Faculty:</b> Shri SHEKHAR KUMAR SAHU, PTGF mechanical Engineering	
<b>Subject:</b> INDUSTRIAL ENGINEERING & MANAGEMENT	<b>No. of Days/week</b> <b>Class Allotted: 60</b>	<b>Semester from date: 05/04/ 2021 to date: 30/06/2021</b> <b>No of weeks: 18</b>	
<b>week</b>	<b>Class Day</b>	<b>Theory Topics</b>	
1 <sup>st</sup>	1 <sup>st</sup>	Selection of Site of Industry.	
	2 <sup>nd</sup>	Define plant layout.	
	3 <sup>rd</sup>	Describe the objective and principles of plant layout.	
	4 <sup>th</sup>	Explain Process Layout	
2 <sup>nd</sup>	1 <sup>st</sup>	Explain Product Layout	
	2 <sup>nd</sup>	Explain Combination Layout.	
	3 <sup>rd</sup>	Techniques to improve layout.	
	4 <sup>th</sup>	Principles of material handling equipment.	
3 <sup>rd</sup>	1 <sup>st</sup>	Plant maintenance.	
	2 <sup>nd</sup>	Importance of plant maintenance.	
	3 <sup>rd</sup>	Break down maintenance.	
	4 <sup>th</sup>	Preventive maintenance.	
4 <sup>th</sup>	1 <sup>st</sup>	Scheduled maintenance.	
	2 <sup>nd</sup>	Introduction to Operations Research and its applications.	
	3 <sup>rd</sup>	Define Linear Programming Problem	
	4 <sup>th</sup>	Problem Solution of L.P.P. by graphical method.	
5 <sup>th</sup>	1 <sup>st</sup>	Evaluation of Project completion time by CPM	
	2 <sup>nd</sup>	Evaluation of Project completion time by PERT	
	3 <sup>rd</sup>	Explain distinct features of PERT with respect to CPM.	
	4 <sup>th</sup>	Solving some basic problems on CPM and PERT for comparison	
6 <sup>th</sup>	1 <sup>st</sup>	Classification of inventory	
	2 <sup>nd</sup>	Objective of inventory control.	
	3 <sup>rd</sup>	Describe the functions of inventories.	
	4 <sup>th</sup>	Benefits of inventory control.	
7 <sup>th</sup>	1 <sup>st</sup>	Costs associated with inventory.	

	2 <sup>nd</sup>	Terminology in inventory control	
	3 <sup>rd</sup>	Explain and Derive economic order quantity for Basic model.	
	4 <sup>th</sup>	Basic numerical	
8 <sup>th</sup>	1 <sup>st</sup>	Define and Explain ABC analysis.	
	2 <sup>nd</sup>	Define Inspection and Quality control.	
	3 <sup>rd</sup>	Describe planning of inspection.	
	4 <sup>th</sup>	Describe types of inspection.	
9 <sup>th</sup>	1 <sup>st</sup>	Advantages and disadvantages of quality control.	
	2 <sup>nd</sup>	Study of factors influencing the quality of manufacture	
	3 <sup>rd</sup>	Explain the Concept of statistical quality control, Control charts	
	4 <sup>th</sup>	X Chart	
10 <sup>th</sup>	1 <sup>st</sup>	R Chart	
	2 <sup>nd</sup>	P Chart	
	3 <sup>rd</sup>	C Chart	
	4 <sup>th</sup>	Methods of attributes.	
11 <sup>th</sup>	1 <sup>st</sup>	Concept of ISO 9001-2008.	
	2 <sup>nd</sup>	Qualitymanagement system, Registration /certification procedure.	
	3 <sup>rd</sup>	Benefits of ISO to the organization.	
	4 <sup>th</sup>	JIT	
12 <sup>th</sup>	1 <sup>st</sup>	Six sigma	
	2 <sup>nd</sup>	7S, Lean manufacturing	
	3 <sup>rd</sup>	Basic Numericals	
	4 <sup>th</sup>		
13 <sup>th</sup>	1 <sup>st</sup>	Introduction to Production planning and control	
	2 <sup>nd</sup>	Major functions of production planning and control	
	3 <sup>rd</sup>	Methods of forecasting	
	4 <sup>th</sup>	Routing	
14 <sup>th</sup>	1 <sup>st</sup>	Scheduling	
	2 <sup>nd</sup>	Dispatching	
	3 <sup>rd</sup>	Controlling	
	4 <sup>th</sup>	Types of production	
15 <sup>th</sup>	1 <sup>st</sup>	Mass production	
	2 <sup>nd</sup>	Batch production	
	3 <sup>rd</sup>	Job order production	
	4 <sup>th</sup>	Principles of product and process planning.	
16 <sup>th</sup>	1 <sup>st</sup>	Revision of Chapter – 6.1,6.2,6.3	
	2 <sup>nd</sup>	Revision of Chapter – 6.4,6.5	
	3 <sup>rd</sup>	Revision of Chapter – 7	
	4 <sup>th</sup>	Revision of Chapter – 8	
17 <sup>th</sup>	1 <sup>st</sup>	Revision of Chapter – 9	
	2 <sup>nd</sup>	Revision of Chapter – 10	
	3 <sup>rd</sup>	Discussion of Probable Questions and Answers (1)	
	4 <sup>th</sup>	Discussion of Probable Questions and Answers(2)	
18 <sup>th</sup>	1 <sup>st</sup>	Discussion of Probable Questions and Answers (3)	
	2 <sup>nd</sup>	Discussion of Probable Questions and Answers(4)	
	3 <sup>rd</sup>	Discussion of Probable Questions and Answers (5)	
	4 <sup>th</sup>	Discussion of Probable Questions and Answers (6)	

