

Name of the Institute:	R.K. INSTITUTE OF ENGG. & TECH.	
Department:	Mechanical Engineering	
Semester:	6 <sup>th</sup> SEM.	
Subject Name with code:	INDUSTRIAL ENGG. & MANAGEMENT TH:1	
Total No. of Class (Required):	60	FROM-22/12/2025 TO-18/04/2026
Faculty Name:	Mr. SATYABRATA NAYAK	

Class No.	Brief Description of the Topic/Chapter to be taught	Remarks
1	<b>1. PLANT ENGINEERING:</b> Selection of Site of Industry, Define plant layout, Describe the objective and principles of plant layout.	
2	Explain Process Layout, Product Layout and Combination Layout, Techniques to improve layout	
3	Principles of material handling equipment, Plant maintenance. Importance of plant maintenance, Break down maintenance, Preventive maintenance, Scheduled maintenance	
4	Revision	
5	<b>2. OPERATIONS RESEARCH :</b> Introduction to Operations Research and its applications.	
6	Define Linear Programming Problem,	
7	Solution of L.P.P. by graphical method. Problem Solve	
8	Problem Solve	
9	Problem Solve	
10	Problem Solve	
11	Evaluation of Project completion time by Critical Path Method and PERT	
12	Problem Solve	
13	Problem Solve	
14	Problem Solve	
15	Explain distinct features of PERT with respect to CPM.	
16	Class test-1	
17	Class test-1	
18	Class test-1	
19	Revision	
20	<b>3. INVENTORY CONTROL:</b> Classification of inventory, Objective of inventory control.	
21	Describe the functions of inventories, Benefits of inventory control.	
22	Costs associated with inventory. Terminology in inventory control	
23	Explain and Derive economic order quantity for Basic model. (Solve numerical)	
24	Problem Solve	
25	Define and Explain ABC analysis.	
26	Revision	

27	<b>4. INSPECTION AND QUALITY CONTROL:</b> Define Inspection and Quality control. Describe planning of inspection. Describe types of inspection	
28	Advantages and disadvantages of quality control , Study of factors influencing the quality of manufacture	
29	Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts).	
30	Problem Solve	
31	Problem Solve	
32	Problem Solve	
33	Methods of attributes , Concept of ISO 9001-2008.	
34	Quality management system, Registration /certification procedure, Benefits of ISO to the organization.	
35	JIT, Six sigma, 7S, Lean manufacturing	
36	Solve related problems	
37	Revision	
38	<b>5. PRODUCTION PLANNING AND CONTROL:</b> Introduction , Major functions of production planning and control	
39	Methods of forecasting	
40	Routing Scheduling , Dispatching , Controlling	
41	Mass production Batch Production Job order production	
42	Principles of product and process planning	
43	Revision	
44	Revision	
45	Revision	
46	Revision	
47	Revision	
48	Revision	
49	Revision	
50	Revision	
51	Revision	
52	Revision	
53	Revision	
54	Revision	
55	Revision	
56	Previous Year Question Discussion	
57	Previous Year Question Discussion	
58	Previous Year Question Discussion	
59	Previous Year Question Discussion	
60	Previous Year Question Discussion	