

**DEPARTMENT OF MECHANICAL ENGINEERING**

**LESSON PLAN**

**6<sup>TH</sup> SEMESTER**

**SUBJECT - INDUSTRIAL ENGG & MANAGEMENT**

**SECTION - A & B**

**SESSION- 2022 - 2023**

<b>MONTH</b>	<b>NO. OF PERIODS AVAILABLE</b>	<b>TOPICS TO BE COVERED</b>
<b>FEB</b>	<b>15</b>	<p><b>1. PLANT ENGINEERING:</b> Selection of Site of Industry. Define plant layout. Describe the objective and principles of plant layout. Explain Process Layout, Product Layout and Combination Layout. Techniques to improve layout. Principles of material handling equipment. Plant maintenance. Importance of plant maintenance. Break down maintenance. Preventive maintenance. Scheduled maintenance.</p>
<b>MARCH</b>	<b>23</b>	<p><b>2. OPERATIONS RESEARCH:</b> Introduction to Operations Research and its applications. Define Linear Programming Problem, Solution of L.P.P. by graphical method. Evaluation of Project completion time by Critical Path Method and PERT (Simple problems)- Explain distinct features of PERT with respect to CPM.</p> <p><b>3. INVENTORY CONTROL:</b> Classification of inventory. Objective of inventory control. Describe the functions of inventories. Benefits of inventory control. Costs associated with inventory. Terminology in inventory control Explain and Derive economic order quantity for Basic model. (Solve numerical) Define and Explain ABC analysis.</p>
<b>APR</b>	<b>22</b>	<p><b>4. INSPECTION AND QUALITY CONTROL:</b> Define Inspection and Quality control. Describe planning of inspection. Describe types of inspection. Advantages and disadvantages of quality control. Study of factors influencing the quality of manufacture. Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts). Methods of attributes. Concept of ISO 9001-2008. Quality management system, Registration /certification procedure. Benefits of ISO to the organization. JIT, Six sigma, 7S, Lean manufacturing , Solve related problems.</p> <p><b>5. PRODUCTION PLANNING AND CONTROL</b> Introduction Major functions of production planning and control Methods of forecasting , Routing, Scheduling Dispatching Controlling , Types of production , Mass production , Batch production , Job order production , Principles of product and process planning.</p>