BIT POLYTECHNIC BALASORE

DEPARTMENT OF MECHANICAL ENGINEERING (2023-24)

LESSON PLAN

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| **Discipline: mechanical engg.** | **Semester: 6TH** | **Name of the Teaching faculty: ER BIBATSA KUMAR PANDA** |
| **Subject: INDUSTRIAL ENGG. AND MANAGEM**  **ENT** | **No of Days**  **/Week class alloted: 4** | **Semester from Date:16/01/2024 To Date: 26 /04/20224**  **No of weeks: 13** |
| **1ST** | **1st** | 1. PLANT ENGINEERING **(Chapter-1)**:    1. Selection of Site of Industry. |
| 1.2 Define plant layout. |
| **2nd** | 1.3 Describe the objective and principles of plant layout. |
| 1.4 Explain Process Layout, Product Layout and Combination Layout. |
| 1.5 Techniques to improve layout. |
| 1.6 Principles of material handling equipment. |
| 1.7 Plant maintenance. |
| **2ND** | **1st** | 1.7.1 Importance of plant maintenance. |
| **2nd** | 1.7.2 Break down maintenance. |
| 1.7.3 Preventive maintenance. |
| **3rd** | 1.7.4 Scheduled maintenance. |
| **4th** | Class test -1 |
| **3RD** | **1st** | 1. OPERATIONS RESEARCH: **(chapter-2)**    1. Introduction to Operations Research and its applications. |
| **2nd** | 2.2 Define Linear Programming Problem, |
| **3rd** | 2.3Solution of L.P.P. by graphical method. |
| **4th** | 2.3Solution of L.P.P. by graphical method. |

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| **4TH** | **1st** | 2.4 Evaluation of Project completion time by Critical Path Method and PERT (Simple problems)- |
| **2nd** | 2.4 Evaluation of Project completion time by Critical Path Method and PERT (Simple problems)- |
| **3rd** | 2.5 Explain distinct features of PERT with respect to CPM. |
| **4th** | Class test - 2 |
| **5TH** | **1st** | 1. INVENTORY CONTROL: **(chapter-3)**    1. Classification of inventory. |
| **2nd** | 3.2 Objective of inventory control. |
| **3rd** | 3.3 Describe the functions of inventories. |
| **4th** | 3.4 Benefits of inventory control. |
| **6TH** | **1st** | * 1. Costs associated with inventory   2. Terminology in inventory control |
| **2nd** | 3.7 Explain and Derive economic order quantity for Basic model. (Solve numerical) |
| **3rd** | 3.7 Explain and Derive economic order quantity for Basic model. (Solve numerical) |
| 3.8 Define and Explain ABC analysis |
| **4th** | Class test-3 |
| **7TH** | **1st** | 1. INSPECTION AND QUALITY CONTROL: **(chapter-4)**    1. Define Inspection and Quality control. 4.2Describe planning of inspection |
| 4.3 Describe types of inspection. |
| **2nd** | 4.4 Advantages and disadvantages of quality control. |
| **3rd** | 4.5 Study of factors influencing the quality of manufacture. |
| 4.6 Explain the Concept of statistical quality control, Control charts (X, R,  P and C - charts). |
| **4th** | 4.6 Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts). |
| **8TH** | **1st** | 4.7 Methods of attributes |
| **2nd** | 4.8 Concept of ISO 9001-2008. |
| **3rd** | 4.9.1 Quality management system, Registration /certification procedure. |

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|  | **4th** | 4.9.2 Benefits of ISO to the organization. |
| **9TH** | **1st** | 4.9.3 JIT, Six sigma,7S, Lean manufacturing |
| **2nd** | 4.9.4 Solve related problems. |
| **3rd** | Class test-4 |
| **4th** | * 1. PRODUCTION PLANNING AND CONTROL **(chapter-5)**   2. Introduction   3. Major functions of production planning and control |
| **10TH** | **1st** | 5.3 Methods of forecasting |
| **2nd** | 5.3.1 Routing |
| **3rd** | 5.3.2Scheduling |
| **4th** | 5.3.3 Dispatching |
| **11TH** | **1st** | 5.3.4 Controlling |
| **2nd** | 5.4 Types of production |
| **3rd** | 5.4.1 Mass production |
| **4th** | 5.4.2 Batch production |
| **12TH** | **1st** | 5.4.3 Job order production |
| **2nd** | 5.5 Principles of product and process planning. |
| **3rd** | Class test-5 |
| **4th** | Doubt clearing class. |

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| **13TH** | **1st** | **Previous year questions solving class.** |
| **2nd** | **Previous year questions solving class.** |
| **3rd** | **Previous year questions solving class.** |
| **4th** | **Previous year questions solving class.** |

Signature of faculty