# LESSON PLAN

**SUB**: INDUSTRIAL ENGINEERING & MANAGEMENT

**BRANCH:- MECHANICAL ENGG.**
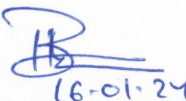
**SEMESTER**: 6th

**NAME OF FACULTY**: ER. LITU BEHERA
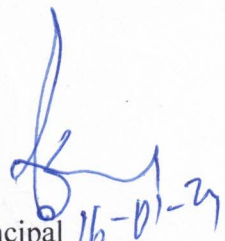


# GOVERNMENT POLYTECHNIC, BHADRAK
# SESSION:2023-24

Hod ,Mechanical

Academic Co-ordinator

Principal
Govt. Polytechnic, Bhadrak

| Discipline:<br>MECHANICAL | Semester:<br>6th | Name of the Teaching<br>Faculty: ER. LITU BEHERA<br>Lecturer Mechanical |
|---|---|---|
| Subject:<br>INDUSTRIAL<br>ENGINEERING &<br>MANAGEMENT | No. of days/per<br>week class<br>allotted:<br>4 | Semester From date:<br>16/01/2024 To date:<br>No of weeks: 15 |
| Week | Class Day | Theory Topics: |
| 1st | 1st | PLANT ENGINEERING: 1.1 Selection of Site of Industry. |
| | 2nd | 1.2 Define plant layout. |
| | 3rd | 1.3 Describe the objective of plant layout. |
| | 4th | 1.2 Describe the principles of plant layout. |
| 2nd | 1st | 1.4 Explain Process Layout. |
| | 2nd | 1.4 Explain Product Layout. |
| | 3rd | 1.4 Explain Combination Layout. |
| | 4th | 1.5 Techniques to improve layout. |
| 3rd | 1st | 1.6 Principles of material handling equipment. |
| | 2nd | 1.7 Plant maintenance. |
| | 3rd | 1.7.1 Importance of plant maintenance. |
| | 4th | 1.7.2 Break down maintenance. |
| 4th | 1st | 1.7.3 Preventive maintenance. |
| | 2nd | 1.7.4 Scheduled maintenance. |
| | 3rd | Revision of Chapter-2 |
| | 4th | Previous year question solutions |
| 5th | 1st | OPERATIONS RESEARCH: 2.1 Introduction to Operations Research and its applications. |
| | 2nd | 2.2 Define Linear Programming Problem, 2.3 Solution of L.P.P. by graphical method. |
| | 3rd | 2.4 Evaluation of Project completion time by Critical Path Method and PERT (Simple problems) |
| | 4th | 2.5 Explain distinct features of PERT with respect to CPM. |

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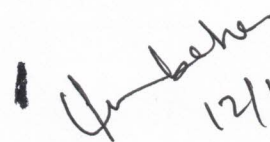| | | | |
|---|---|---|---|
| 6th | 1st | Revision of Chapter-2 | |
| | 2nd | Previous year question solutions | |
| | 3rd | INVENTORY CONTROL: 3.1 Classification of inventory. | |
| | 4th | 3.2 Objective of inventory control. | |
| 7th | 1st | 3.3 Describe the functions of inventories. | |
| | 2nd | 3.4 Benefits of inventory control. | |
| | 3rd | 3.5 Costs associated with inventory. | |
| | 4th | 3.6 Terminology in inventory control | |
| 8th | 1st | 3.7 Explain and Derive economic order quantity for Basic model. (Solve numerical) | |
| | 2nd | 3.8 Define and Explain ABC analysis. | |
| | 3rd | Revision of Chapter-3 | |
| | 4th | Previous year question solutions | |
| 9th | 1st | INSPECTION AND QUALITY CONTROL: 4.1Define Inspection and Quality control. | |
| | 2nd | 4.2Describe planning of inspection. | |
| | 3rd | 4.3 Describe types of inspection. | |
| | 4th | 4.4 Advantages and disadvantages of quality control. | |
| 10th | 1st | 4.5 Study of factors influencing the quality of manufacture. | |
| | 2nd | 4.6 Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts). | |
| | 3rd | 4.7 Methods of attributes. | |
| | 4th | 4.8 Concept of ISO 9001-2008. | |

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| **11th** | 1st | 4.9.1 Quality management system, Registration /certification procedure. |
| | 2nd | 4.9.2 Benefits of ISO to the organization. |
| | 3rd | 4.9.3 JIT, Six sigma,7S, Lean manufacturing |
| | 4th | 4.9.4 Solve related problems. |
| **12th** | 1st | Revision of Chapter-4 |
| | 2nd | Previous year question solutions |
| | 3rd | PRODUCTION PLANNING AND CONTROL 5.1 Introduction |
| | 4th | 5.2 Major functions of production planning and control |
| **13th** | 1st | 5.3 Methods of forecasting |
| | 2nd | 5.3.1 Routing |
| | 3rd | 5.3.2 Scheduling |
| | 4th | 5.3.3 Dispatching |
| **14th** | 1st | 5.3.4 Controlling |
| | 2nd | 5.4 Types of production |
| | 3rd | 5.4.1 Mass production |
| | 4th | 5.4.2 Batch production |
| **15th** | 1st | 5.4.3 Job order production |
| | 2nd | 5.5 Principles of product and process planning. |
| | 3rd | Revision of Chapter-5 |
| | 4th | Previous year question solutions |

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