**DEPARTMENT OF MECHANICAL ENGINEERING**

**LESSON PLAN (2022-2023)**

| Discipline: Electrical | Semester: 3RD | Name of the Teaching faculty: Mr. Ajay Kumar Sahoo |
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| Subject: ME LAB | No of Days/Week class alloted: 3 | Semester from Date: 15.09.2022 To Date: 22.12.2022<br>No of weeks: 15 |

| Week | Class Day | Topics |
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| 1st | 2nd (3p), Gr 2 | Determine M. A, V.R and efficiency of screw jack . |
| | | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| | | iv) Taking readings and calculates M.A, V.R and Efficiency by students |
| 2nd | 1st (3p), Gr 1 | Determine M. A, V.R and efficiency of screw jack . |
| | | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| | | iv) Taking readings and calculates M.A, V.R and Efficiency by students |
| | 2nd (3p), Gr 2 | i) Record check and viva. |
| | | Determine Co-efficient of friction of bearing. |
| | | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| 3rd | 2nd (3p), Gr 1 | i) Record check and viva. |
| | | Determine Co-efficient of friction of bearing. |
| | | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| | 3rd (3p), Gr 2 | i) Taking readings and calculate Co-efficient of friction by students |
| | | ii) Record check and viva. |
| 4th | 2nd (3p), Gr 1 | i) Taking readings and calculate Co-efficient of friction by students |
| | | ii) Record check and viva. |
| | 3rd (3p), Gr 2 | Determine Youngs modulus by Searles apparatus. |
| | | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| | | i) Taking readings and calculate Youngs modulus by students |
| 5th | 2nd (3p), Gr 1 | Determine Youngs modulus by Searles apparatus. |
| | | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| | | i) Taking readings and calculate Youngs modulus by students |
| | | i) Record check and viva. |
| | | Determine M. A, V.R and efficiency of wheel train . |

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| | 3rd (3p), Gr 2 | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| 6th | 2nd (3p), Gr 1 | i) Record check and viva. |
| | | Determine M. A, V.R and efficiency of wheel train . |
| | | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| | 3rd (3p), Gr 2 | i) Taking readings and calculate M. A, V.R and efficiency by students |
| | | ii) Record check and viva. |
| 7th | 2nd (3p), Gr 1 | i) Taking readings and calculate M. A, V.R and efficiency by students |
| | | ii) Record check and viva. |
| | 3rd (3p), Gr 2 | Determination of Bending stress in beam using strain gauge. |
| | | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| | | iv) Taking readings and calculate Bending stress by students |
| 8th | 2nd (3p), Gr 1 | Determination of Bending stress in beam using strain gauge. |
| | | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| | | iv) Taking readings and calculate Bending stress by students |
| | 3rd (3p), Gr 2 | i) Record check and viva. |
| | | Study of Universal Testing Machine and determine tensile stress and Youngs modulus of M.S specification. |
| | | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| 9th | 2nd (3p), Gr 1 | i) Record check and viva. |
| | | Study of Universal Testing Machine and determine tensile stress and Youngs modulus of M.S specification. |
| | | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| | 3rd (3p), Gr 2 | i) Taking readings and calculate tensile stress and youngs modulus by students |
| | | ii) Record check and viva. |
| 10th | 2nd (3p), Gr 1 | i) Taking readings and calculate tensile stress and youngs modulus by students |
| | | ii) Record check and viva. |
| | 2nd (3p), Gr 2 | Study of pressure measuring devices such as (a) Piezometer(b) Simple manometer. |
| | | i) Construction. |
| | | ii) Working. |
| | | iii) Record check and viva. |
| | | Study of pressure measuring devices such as (a) Piezometer(b) Simple manometer. |

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| 11th | 2nd (3p), Gr 1 | i) Construction. |
| | | ii) Working. |
| | | i) Record check and viva. |
| | 2nd (3p), Gr 2 | Study of venturimeter. |
| | | i) Construction. |
| | | ii) Working. |
| | | i) Record check and viva. |
| 12th | 2nd (3p), Gr 1 | Study of venturimeter. |
| | | i) Construction. |
| | | ii) Working. |
| | | i) Record check and viva. |
| | 2nd (3p), Gr 2 | Verification of bernoulis theorem. |
| | | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| | | iv) Taking readings, calculate and verify bernoulis theorem by students |
| 13th | 2nd (3p), Gr 1 | Verification of bernoulis theorem. |
| | | i) Aim of the expt, Theory |
| | | ii) Tools and Equipments required |
| | | iii) Demonstration |
| | | iv) Taking readings, calculate and verify bernoulis theorem by students |
| | 2nd (3p), Gr 2 | Model study of Centrifugal pumps, Francies, Kaplan and pelton wheel turbines. |
| | | i) Construction. |
| | | ii) Working. |
| | | i) Record check and viva. |
| 14th | 2nd (3p), Gr 1 | Model study of Centrifugal pumps, Francies, Kaplan and pelton wheel turbines. |
| | | i) Construction. |
| | | ii) Working. |
| | | i) Record check and viva. |
| | 2nd (3p), Gr 2 | Study of Cochran Boiler and demonstration of Steam engine. |
| | | i) Construction. |
| | | ii) Working. |
| | | i) Record check and viva. |
| 15th | 2nd (3p), Gr 1 | Study of Cochran Boiler and demonstration of Steam engine. |
| | | i) Construction. |
| | | ii) Working. |
| | | i) Record check and viva. |
| | 2nd (3p), Gr 2 | Study and Demonstration of Diesel engine and Petrol engine. |
| | | i) Construction. |
| | | ii) Working. |
| | | i) Record check and viva. |
| 16th | 2nd (3p), Gr 1 | Study and Demonstration of Diesel engine and Petrol engine. |
| | | i) Construction. |
| | | ii) Working. |
| | | i) Record check and viva. |