

St.Joseph's College of Engineering, Chennai 600 119
Department of Mechanical Engineering
Dynamics of Machinery Laboratory Equipment Details

| S.No | Name of the equipment | Description of the equipment | Quantity |
|-------------|--|---|-----------------|
| 1 | Whirling Shaft | Determines critical speeds of shafts with concentrated loads. | 01 |
| 2 | Longitudinal Vibration of spring mass system | Determines natural Frequency and verification of Laws of springs-Damping coefficient determination. | 01 |
| 3 | Torsional Vibration equipment | Determines torsional natural frequency of single and Double Rotor systems. - Undamped and Damped Natural frequencies. | 01 |
| 4 | Dynamic Balancing machine | Balancing of rotating masses. Balancing of reciprocating masses. | 01 |
| 5 | Measurement of Temperature (Radiation Pyrometer) | For measurement of Temperature | 01 |
| 6 | Prony brake dynamometer system | A loading device | 01 |
| 7 | Rope brake dynamometer | A loading device | 01 |
| 8 | Eddy current dynamometer | A loading device | 01 |

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| 9 | Speed measurement demonstration system | Determination of critical speeds of shafts with concentrated loads. | 01 |
| 10 | Motorized gyroscope | Studies gyroscopic effect and couple | 01 |
| 11 | Universal Governor(Watt, Porter, Proell & Hartnell) | Determines range sensitivity, effort etc., for Watts, Porter, Proell, and Hartnell Governors. | 01 |
| 12 | Cam Analysis | Cam profile drawing, Motion curves and study of jump phenomenon | 01 |
| 13 | Vib - Lab | Determines Vibration of Equivalent Spring mass system - undamped and damped vibration. | 01 |
| 14 | Vibration pickup accelerometer | Determination of transmissibility ratio using vibrating table. | 01 |
| 15 | Skotch yoke model | Converts linear motion of a slider into rotational motion. | 01 |
| 16 | Spur gear model | Study of gear parameters. | 01 |
| 17 | Epicyclic gear train | Experimental study of velocity ratios of simple, compound, Epicyclic and differential gear trains. | 01 |
| 18 | Gear pump model | Study of gear parameters. | 01 |

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|----|--------------------------|--|----|
| 19 | Crank and connecting rod | Kinematics of Four Bar, Slider Crank, Crank Rocker, Double crank, Double rocker, Oscillating cylinder Mechanisms.. | 01 |
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