

Lesson Plan & Work-done Diary for AY:2024-25, Even Semester

| Course with Code: Machine Design – BME602 | | | | | Faculty: Mr. Rohith S | | Semester: 6 th | |
|---|-----------|-----------------------|--|---------------------|----------------------------|----------------|---------------------------|--------------------------|
| Module | Class No. | Date planned. (DD/MM) | Topics to be covered | TLP Planned | Date of Conduction (DD/MM) | Topics Covered | TLP Executed | Remarks if any deviation |
| MODULE-1 | 1 | | Bridge course on mechanics, material science, and mathematics | PPT Chalk & Talk | | | | |
| | 2 | | Introduction to course | PPT | | | | |
| | 3 | | Engineering materials and their properties; use of codes and standards, selection of Preferred sizes | Chalk & Talk | | | | |
| | 4 | | Review of axial, bending, shear and torsion loading on machine components | Chalk & Talk | | | | |
| | 5 | | Numerical on combined loading | Chalk & Talk | | | | |
| | 6 | | Concept of theories of failure | Chalk & Talk | | | | |
| | 7 | | Concept of Mohr's theory | Chalk & Talk | | | | |
| | 8 | | Introduction & numerical on Impact loading. | Chalk & Talk | | | | |
| | 9 | | Introduction to fatigue failure, Mechanism of fatigue failure, types of fatigue loading | Chalk & Talk | | | | |
| | 10 | | S-N Diagram, Low and high cycle fatigue. | Chalk & Talk | | | | |

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| MODULE-2 | 11 | | Keys: Types of keys and their applications | Chalk & Talk | | | | |
| | 12 | | Design considerations in parallel & tapered sunk keys | Chalk & Talk | | | | |
| | 13 | | Design of square and rectangular sunk keys | Chalk & Talk | | | | |
| | 14 | | Introduction to couplings | Chalk & Talk | | | | |
| | 15 | | Design of Flange coupling | Chalk & Talk | | | | |
| | 16 | | Design of Bush and Pin type coupling. | Chalk & Talk | | | | |
| | 17 | | Introduction to Shafts and types of shafts | Chalk & Talk | | | | |
| | 18 | | Design of shafts subjected to combined bending | Chalk & Talk | | | | |
| | 19 | | Design of shafts subjected to torsional bending | Chalk & Talk | | | | |
| | 20 | | Design of shafts subjected to axial bending | Chalk & Talk | | | | |

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| MODULE-3 | 21 | | Introduction to riveted joints - Types of rivets, rivet materials | Chalk & Talk | | | | |
| | 22 | | Concept of caulking and fullering, failures of riveted joints | Chalk & Talk | | | | |
| | 23 | | Numerical on riveted joints | Chalk & Talk | | | | |
| | 24 | | Numerical on Boiler joints | Chalk & Talk | | | | |
| | 25 | | Numerical on riveted brackets | Chalk & Talk | | | | |
| | 26 | | Introduction to Welded joints and strength of butt and fillet welds | Chalk & Talk | | | | |
| | 27 | | Numerical on welded brackets | Chalk & Talk | | | | |
| | 28 | | Introduction to Spur gear – Numerical on Spur gear | Chalk & Talk | | | | |
| | 29 | | Numerical on Spur gear | Chalk & Talk | | | | |
| | 30 | | Numerical on Spur gear | Chalk & Talk | | | | |

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| MODULE-4 | 31 | | Introduction to Helical gear – Numerical on helical gear | Chalk & Talk | | | | |
| | 32 | | Numerical on helical gear | Chalk & Talk | | | | |
| | 33 | | Numerical on helical gear | Chalk & Talk | | | | |
| | 34 | | Introduction to Bevel gear – Numerical on bevel gear | Chalk & Talk | | | | |
| | 35 | | Numerical on bevel gear | Chalk & Talk | | | | |
| | 36 | | Numerical on bevel gear | Chalk & Talk | | | | |
| | 37 | | Introduction to worm gear – Numerical on worm gear | Chalk & Talk | | | | |
| | 38 | | Numerical on worm gear | Chalk & Talk | | | | |
| | 39 | | Numerical on worm gear | Chalk & Talk | | | | |
| | 40 | | Quiz 1 | PPT | | | | |

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| MODULE-5 | 41 | | Introduction to Clutches - Design of single plate, multi-plate, and cone clutches | Chalk & Talk | | | | |
| | 42 | | Numerical on clutches | Chalk & Talk | | | | |
| | 43 | | Introduction to brakes – Numerical on brakes | Chalk & Talk | | | | |
| | 44 | | Numerical on brakes | Chalk & Talk | | | | |
| | 45 | | Introduction to lubrication and their properties, mechanisms of lubrication | Chalk & Talk | | | | |
| | 46 | | Introduction to bearing materials and properties | Chalk & Talk | | | | |
| | 47 | | Numerical on Bearings | Chalk & Talk | | | | |
| | 48 | | Introduction to Anti friction bearing | PPT | | | | |
| | 49 | | Quiz 2 | PPT | | | | |
| | 50 | | Discussion on previous year QP | | | | | |

| | Activity | Planned | Actual | Remarks |
|---------------------------|--|----------------|---------------------------|----------------|
| 1 | Theory Classes | 50 | | |
| 2 | Assignments/ Quizzes/ Self-study | 3 | | |
| 3 | Tutorials/ Extra classes | - | | |
| 4 | Internal Assessments | 3 | | |
| 5 | ICT based Teaching (% of usage in Curriculum) | | | |
| Planning | | | Execution | |
| Faculty Signature: | | | Faculty Signature: | |
| HoD Signature: | | | HoD Signature: | |