

LESSON PLAN : 2023-24

SUBJECT :VEHICLE MAINTENANCE AND MOTORVEHICLE ACT (6TH SEM)

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| Class No. | Topic | Subtopics | Teaching Aids/Activities |
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| 1 | Introduction to Maintenance | Definition, Need for Maintenance | PPT, Whiteboard |
| 2 | Types of Maintenance | Preventive, Predictive, Breakdown, Corrective, TPM | Diagrams, Case Studies |
| 3-4 | Breakdown Maintenance | Definition, Examples, Real-life Scenarios | Videos, Examples |
| 5-6 | Preventive Maintenance | Scheduled Checks, Advantages, Scope | Charts, Service Schedules |
| 7-8 | Predictive & TPM | Condition Monitoring, Equipment Health, TPM Pillars | Animated PPTs, TPM Models |
| 9 | Service Station Basics | Definition, Types (Private, Govt., Authorized) | Site Photos, Videos |
| 10-11 | Criteria for Service Station | Location, Accessibility, Facilities | Case study, Comparison Chart |
| 12-13 | Workshop Layout | Elements, Layout Design, Flow of Work | Blueprints, Layout Drawings |
| 14 | Job Card | Meaning, Importance, Format | Sample Job Cards, Demo |
| 15-16 | Tools Overview | Classification, Hand Tools, Power Tools | Tool Identification Kit, Catalogs |
| 17 | Spanners & Wrenches | Types, Uses | Tool Kit Demo, Hands-on |
| 18 | Screwdrivers | Types of Screws, Application of Screwdrivers | Live Demo |
| 19 | Torque Wrenches | Calibration, Usage in Engines | Demo Videos |
| 20 | Pliers, Allen Keys | Types, Use in Maintenance | Physical Tools Display |
| 21 | Hammers, Chisels | Purpose, Handling Safety | Safety Posters, Workshop Practice |
| 22 | Files, Hacksaws | Material Finishing Tools | Live Demo |
| 23 | Wire Brush, Scraper | Cleaning & Prep Tools | Workshop Tools |
| 24 | Taps and Dies | Thread Cutting Tools | Threading Activity |
| 25 | Measuring Tools | Types, Micrometers, Vernier Calipers | Measurement Activity |
| 26 | Valve & Piston Tools | Valve Spring Compressor, Piston Ring Compressor | Engine Assembly Tools |
| 27 | Pullers, C-Clamp | Bearing/Part Removal | Demo |
| 28 | Pneumatic Tools | Impact Wrenches, Air Tools | Video Demo, Workshop Visit |
| 29 | Machine Tools | Drilling Machine, Grinder, Hydraulic Jack | Live Workshop Tour |
| 30 | Lubrication Equipment | Grease Gun, Oil Can, Filter Tools | Hands-on Tools Session |
| 31 | Tyre Changing Equipment | Tyre Changer, Tyre Levers, Wheel Balancer | Demo Machine |
| 32 | Brake & Wash Equipment | Brake Bleeder, Car Wash Machine | Demonstration |

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| 33 | Diagnostic Tools | Engine Analyzer, Spark Plug Tester, Injector Tester | Tool Handling Practice |
| 34 | Battery Tools | Battery Charger, Tester | Video Tutorial |
| 35–36 | Troubleshooting (Engine) | Common Faults, Causes, Remedies | Fault Tree Analysis, Case Studies |
| 37–38 | Troubleshooting (Fuel System) | Fuel Lines, Filters, Injectors | Chart, Hands-on Lab |
| 39–40 | Troubleshooting (Cooling & Lube) | Radiator, Water Pump, Oil Circulation | Fault Simulation Board |
| 41–42 | Engine Overhaul | Dismantling, Inspection, Assembly Process | Engine Workshop Session |
| 43–44 | Chassis & Body Overhaul | Suspension, Steering, Brakes, Frame Repair | Vehicle Live Demo |
| 45 | MV Act: Introduction | Objective, Scope | Legal PPT, Handbook |
| 46 | Driving License Rules | Sections 3, 4, 5, 19 | Legal Documents Sample |
| 47 | Registration of Vehicles | Sections 39, 49, 50, 51 | RC Formats, Application Forms |
| 48 | Safety Sections | Sections 128, 129, 130, 133 | Traffic Safety Videos, Helmets, Charts |
| 49 | Grant of Licenses | Procedures, Types of Licenses | Govt. Portal Demo |
| 50 | Registration Process | Permanent, Temporary, Renewal | Form Filling Practice |
| 51 | Refusal & Condition | Refusal, Reasons, Appeals | Flowcharts, Case Examples |
| 52 | Review & Recap (Unit 1–3) | Maintenance, Service Station, Tools | Quiz, Flash Cards |
| 53 | Review & Recap (Unit 4–5) | Repair, Overhaul, Motor Vehicle Act | Group Discussion, MCQ |
| 54–55 | Internal Assessment Prep | MCQ, Short/Long Questions | Mock Test, Q&A |
| 56 | Model Test – Theory | Full Syllabus Coverage | Written Paper |
| 57 | Model Test – Viva | Tools ID, Legal Aspects, Maintenance | Oral Viva |
| 58 | Practical Demonstration | Engine Fault Diagnosis, Tool Handling | Lab Practical |
| 59 | Industry Visit / Guest Talk | Local Workshop / RTO Visit or Talk on MV Act | Field Visit Report |
| 60 | Final Revision + Doubts | Syllabus Wrap-Up, Key Takeaways | Open House, Last-Minute Doubt Clearing |