

AUTOMOBILE TECHNOLOGY

Class XII

AUTO SHOP REPAIR & PRACTICE (628)

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THEORY

Time: 2.5 Hours+2.5 Hours

**Theory: 50
Practical: 50**

1.	Service Manual	2
	<ul style="list-style-type: none">• Reading of service manual.	
2.	Inspection and Repairs of the Fasteners	4
	<ul style="list-style-type: none">• Identification of fasteners used in a vehicle.• Various procedure used for removal of fasteners from the unit.	
3.	Measuring Equipments	10
	<ul style="list-style-type: none">• Handling and Use of dial gauge, telescopic gauge and bore gauge.• Handling and Use of Vernier caliper and tyre depth gauge.• Handling and Use of micrometer.• Handling and Use of hydrometer and bevel gauge.• Handling and Use of torque wrench and filler gauge.• Usage of various gauges in a dashboard in vehicle.	
4.	Suspension System	10
	<ul style="list-style-type: none">• Maintenance of suspension system.• Service and replacement of leafs, cambering of leaf springs, shackle, shackle pin and centre bolt.• Replacement of strut/shock absorbers, inspection of steering linkages.• Manual and Power steering systems, Air suspension system.• Steering system adjustments.	
5.	Serviceability, Replacement or Repair of Components	10
	<ul style="list-style-type: none">• Reconditioning of valve mechanism.• Inspection and replacement of piston rings.• Inspection and replacement of connecting rod and engine bearing.• Testing of cooling system and replacement of defective component.• Regular servicing of MPFI system.• Servicing of CRDI / Non-CRDI system.	
6.	Transmission System	6
	<ul style="list-style-type: none">• Servicing of propeller/drive shaft, universal and slip joints.• Servicing of differential unit and adjustments.• Introduction to automatic transmission system.	
7.	Auto Electrical System	8
	<ul style="list-style-type: none">• Reading of electrical symbol, circuit diagrams, colour codes and specification of cables and wiring hardness.	

- Multi meter, timing light (stroboscope) and oscilloscope and its application.
- Battery and its maintenance.
- Circuit diagram for battery charging.
- Checking of electrical connections and lights in a vehicle.
- Lighting system, application and replacement of fuses.
- Horn assembly, electrical fuel gauge and fuel pump their application and maintenance.
- Circuit diagram for starter circuit.
- Circuit diagram for ignition circuit.
- Servicing of wiper system.
- Introduction of HVAC System in a vehicle.

Note: Practical will be based on aforesaid theory paper.