

For Syllabus, Question Papers, Notes & many More

AT6702 VEHICLE MAINTENANCE

DETAILED SYLLABUS

UNIT I MAINTENANCE, WORKSHOP PRACTICES, SAFETY AND TOOLS

Maintenance – Need, importance, primary and secondary functions, policies - classification of maintenance work - vehicle insurance - basic problem diagnosis. Automotive service procedures – workshop operations – workshop manual - vehicle identification. Safety – Personnel, machines and equipment, vehicles, fire safety - First aid. Basic tools – special service tools – measuring instruments – condition checking of seals, gaskets and sealants. Scheduled maintenance services – service intervals - Towing and recovering.

UNIT II ENGINE AND ENGINE SUBSYSTEM MAINTENANCE

General Engine service- Dismantling of Engine components- Engine repair- working on the underside, front, top, ancillaries- Service of basic engine parts, cooling and lubricating system, fuel system, Intake and Exhaust system, electrical system - Electronic fuel injection and engine management service - fault diagnosis- servicing emission controls.

UNIT III TRANSMISSION AND DRIVELINE MAINTENANCE

Clutch- general checks, adjustment and service- Dismantling, identifying, checking and reassembling transmission, transaxle- road testing- Removing and replacing propeller shaft, servicing of cross and yoke joint and constant velocity joints- Rear axle service points- removing axle shaft and bearings- servicing differential assemblies- fault diagnosis.

UNIT IV STEERING, BRAKE, SUSPENSION, WHEEL MAINTENANCE

Inspection, Maintenance and Service of Hydraulic brake, Drum brake, Disc brake, Parking brake. Bleeding of brakes. Inspection, Maintenance and Service of Mc person strut, coil spring, leaf spring, shock absorbers. Dismantling and assembly procedures. Wheel alignment and balance, removing and fitting of tyres, tyre wear and tyre rotation. Inspection, Maintenance and Service of steering linkage, steering column, Rack and pinion steering, Recirculating ball steering service- Worm type steering, power steering system.

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UNIT V AUTO ELECTRICAL AND AIR CONDITIONING MAINTENANCE

Maintenance of batteries, starting system, charging system and body electrical -Fault diagnosis using Scan tools. Maintenance of air conditioning parts like compressor, condenser, expansion valve, evaporator - Replacement of hoses- Leak detection- AC Charging- Fault Diagnosis Vehicle body repair like panel beating, tinkering, soldering, polishing, painting.

TEXT BOOKS

1. Ed May, "Automotive Mechanics Volume One", Mc Graw Hill Publications, 2003.
2. Ed May, "Automotive Mechanics Volume Two", Mc Graw Hill Publications, 2003.
3. Vehicle Service Manuals of reputed manufacturers.

REFERENCES

1. Bosch Automotive Handbook, Sixth Edition, 2004.

OBJECTIVES

To know about the various methods of maintaining vehicles and their subsystems.