



| Teaching Scheme | | | Credits | Examination Marks | | | | Total Marks |
|-----------------|---|---|---------|-------------------|--------|-----------------|--------|-------------|
| L | T | P | | Theory Marks | | Practical Marks | | |
| | | | C | ESE (E) | PA (M) | ESE (V) | PA (I) | |
| 3 | - | 0 | 3 | 50 | - | - | - | 50 |

Course Content:

| Unit No. | Content | Hrs. |
|---------------------|---|-----------|
| 1 | Workshop Equipment: Equipment for testing electrical accessories: Electric test bench, growler, coil tester, ignition and cam-dwell-angle tester; wiring harness tester. Ampere-hour battery tester, voltmeter tester, Layout of diesel injector and F.I.P. reconditioning shop, Tools and equipment required | 08 |
| 2 | Lubrication and Maintenance Schedule: Necessity for routine maintenance, Importance of service manuals, Specification of engines petrol and diesel vehicles (a) Engine (b) Clutch (c) Gear Box (d) Propeller shaft (e) Universal joints (f) Differential (g) Axles and hubs | 12 |
| 3 | Lubrication and Maintenance Schedule: (a) Suspension system (b) Steering system (c) Tyre (d) Chassis (e) Brake-drum and disc (f) Battery (g) Self starter (h) Dynamo | 12 |
| 4 | Fuel System: Maintenance Schedule of diesel engine fuel injector, hot plugs, rotary and reciprocating type of fuel injection pump, fuel injection pump of single cylinder engines, hoses & pipe lines, priming unit, tanks. Electricals: Maintenance Schedule of batteries, starter motor, dynamo, ignition system, wiper motor, electrical fuel pump, alternator, horn, flasher unit. | 4 |
| 5 | Engine Tuning: (a) Engine tuning of conventional and MPFI petrol engine. Adjustments of spark plug gap, valve tappet clearance, head bolts, Use of vacuum and compression gauge, Air cleaner cleaning, Ignition timing setting by timing light, Pollution checking, Troubleshooting | 6 |
| Total Hours: | | 42 |

Suggested Specification table with Marks (Theory):

| Distribution of Theory Marks | | | | |
|------------------------------|---------|---------|---------|---------|
| R Level | U Level | A Level | N Level | E Level |
| 5 | 15 | 15 | 10 | 5 |

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate and above Levels (Bloom's Taxonomy)

Reference Books:

1. Automobile Mechanics, A.K. Babu, S.C.Sharma, T.R. Banga, Khanna Publishing House