

SYLLABUS TERM-2

AUTOMOBILE ENGINEERING

Paper-I

WORKSHOP TECHNOLOGY

WELDING : Basic principle of gas and arc welding. Difference between gas and arc welding, arc welding transformer set, arc and gas welding equipments, Introduction to electrodes, flux, welding joints, soldering and brazing.

GRINDING : Constructional features of grinder, bench and its working.

Paper-II

GARAGE PRACTICE AND MANAGEMENT

5. Basic inventory control and store keeping.

- (a) Concept of maximum stock, safety stock, lead time and economic recorder quantity, ABC analysis.
- (b) Duties of store keeper.
- (c) Method of keeping store.

6. Elements of shop act regarding working hours, holidays; definition of worker.

7. **Insurance :** Purpose and provision of third party insurance.

8. Salesmanship

- a. Duties of Salesman
- b. Personal qualities of salesman
- c. Advertising and publicity.
- d. As per new motor vehicle act. 1

9. Motor Vehicle rules As per New Motor Vehicle Act.

- a. Light duty vehicle.
- b. Heavy duty vehicle.
- c. Stage carriage.
- d. Public carrier.
- e. Private carrier.
- f. Invalid carriage.

10. Rules Relating to :

- a. Size of letters and background colour of number plates of different types of vehicles.
- b. Location of lights and masking.
- c. Minimum space required for passenger, gang way, floor to ceiling, front and overhang.
- d. Safety aspect in terms of condition of tyre, brakes, steering, exhaust.
- e. Traffic signs found installed on the road.
- f. Signalling by driver and what it communicates to other road users.
- g. Prescribed forms for driving licence, registration, permit, fitness certificate.
- h. Offences and penalties of driving vehicle without
 - i. Driving Licence.
 - (ii) Registration.
 - (iii) Permit.
 - (iv) Fitness Certificate.
 - (i) Euro/Bharat pollution control norms.

Paper-III AUTOMOBILE SUSPENSION & CONTROL

IV. Brakes : Functions of brakes, Layout of brake system, stopping, stopping distance. Types of brakes-mechanical and hydraulic, parking brake.

Constructional details of mechanical and hydraulic brake system. Brake drum, brake shoe and lining material, Simple master cylinder and wheel cylinder. Trouble shooting of brakes and their adjustments, bleeding of brakes.

V. Wheels and Tyres : Types of wheel discs and rims and their constructional features, tyre pressure, spoked wheels, and casted wheels. Types of tyres and their constructional features. Tyre specifications, tyre rotation, causes of tyre wear, tyre retreating, trouble shooting of tyres and their maintenance.

VI. Electrical System : Objectives, lighting circuits, layout and its function, lamps, functions Head Light, Tail Light, and colour coding of cables, connectors, switches, wind screen wiper, horn, gauges (fuel level and temperature).