

(B) Practice.

The practical examination will include examples from the following list:—

- (1) Filing to a reasonable degree of accuracy; chipping and fitting of keys; sharpening of drills; tempering and grinding hand tools.
- (2) Drilling, reaming, screwing, and tapping; care and use of tools used therein.
- (3) Soldering, brazing and riveting.
- (4) Facing and grinding valves and valve seat cutting.
- (5) Annealing and bending of copper pipes.

II. INTERMEDIATE EXAMINATION SYLLABUS.

(A) Theory.

The written examination will include questions on the following subjects:—

- (1) Transmission; clutches, wet and dry; types of clutches, cone, multiple disc, dry plate, and Hele Shaw; methods of adjustment and repair; operation of clutch stops.
- (2) Gear boxes, types, selective, epicyclic; operation.
- (3) Universal joints; types, fabric couplings, metal joints, &c.
- (4) Rear axles; types, live and dead, semi-float, three-quarter and full float.
- (5) Differentials; types, bevel gear and straight tooth; working principles, adjustments: Final drive, bevel gear, worm gear, straight and helical tooth.
- (6) Brakes; types, internal and external, mechanical and hydraulic; lining and materials; methods of adjustment and equalization.
- (7) Steering gears.
- (8) Chassis, construction and methods of springing; drive and torque reaction; variation of torque and braking effect; principle of front-axle assembly.

(B) Practice.

The practical examination will include examples from the following list:—

- (1) Lathework, turning, boring, setting up, &c.
- (2) Remetalling, fitting and scraping bearings.
- (3) Assembling and aligning pistons, connecting-rods, and crankshafts, and the fitting of piston rings and gudgeon pins.
- (4) Use of micrometer and vernier gauge.
- (5) Adjustments of contact breakers and distributors in connection with ignition systems, spark-plug adjustments.

III. FINAL EXAMINATION SYLLABUS.

(A) Theory.

The written examination will include questions on the following subjects:—

- (1) Fuel; storage. Carburettors; types, surface and spray (float feed); pressure and gravity gasoline systems; vacuum tanks, care and operation; choke-tubes, jets, compensating jets, &c., dash pots and metering pins, &c.; hot-air pipes; adjustments of well-known makes.
- (2) Bearings, types and materials; ball and roller bearings; thrust bearings, compound bearings, housings for ball and roller bearings.
- (3) Cooling systems, thermo syphon, forced circulation and air-cooled; circulating pumps (centrifugal) thermostats.
- (4) Lubricating systems, drip, forced, and splash; oil-pumps, gear and plunger types; pressure and circulation indicators.
- (5) Ignition systems and timing, starting and lighting systems considered in greater detail.

(B) Practice.

- (1) Carburettor adjustment.
- (2) Wiring (lighting and ignition).
- (3) Starting and lighting systems, standard type. Single and double wire systems.
- (4) Switches and cut-outs.
- (5) Distributors and timers. Breaker mechanism and contacts.