

(ENGLISH)

[TIME ALLOWED—3 HOURS]

(MARKS—100)

DIESEL ENGINE (THEORY-II)**Marks**1. (a) Fill in the blanks with proper word (*any five*) :—

5

(i) Spark at C. B. point is due to

(a) Weak HT. coil (b) Short plug

(c) Weak capacitor.

(ii) Combustion of diesel in diesel engine is due to

(a) spark plug (b) compression (c) injector.

(iii) Due to detonation engine

(a) delays starting (b) leaks oil

(c) produces knocking sound.

(iv) In automobile type of battery is used.

(a) cadmium alkaline (b) Nickel alkaline

(c) Lead acid.

(v) Starting motor requires current.

(a) less (b) more (c) very less.

(vi) Main function of piston is

(a) to move engine (b) to complete engine stroke

(c) to increase power.

(b) State whether *true* or *false* (*any five*) :—

5

(i) I.C. Engine power stroke is called Idle stroke.

(ii) Cylinder liner is made up of cast iron.

(iii) Opening of valve before T.D.C. or B.D.C. is called lead period.

(iv) Engine valve opens by crankshaft.

(v) Rich mixture is provided to start cold engine.

(vi) Head gasket is of copper and asbestos.

(c) State the long form (*any five*) :—

5

(i) C.B. point (ii) F.H.P.

(iii) T.D.C. (iv) H.S.D.

(v) E.M.F. (vi) L.S.D.

- (d) Match the pairs :— 5
- | ‘ A ’ Group | ‘ B ’ Group |
|---------------------------|--|
| (i) Direct cooling | (a) Working at 68 ⁰ c temperature |
| (ii) Water pump | (b) Fuel supply |
| (iii) Fuel injection pump | (c) Water cooling |
| (iv) Indirect cooling | (d) Combustion |
| (v) Thermostat valve | (e) Centrifugal force |
| | (f) Air cooling. |
2. Attempt any *two* of the following :— 16
- (a) Elaborate thermostat valve and its function.
 - (b) Explain Mechanical Governor with neat sketch.
 - (c) Explain pollution control system.
 - (d) Engine sounds loudly. List troubles and remedies.
3. Attempt any *two* of the following :— 16
- (a) Explain lead acid battery with diagram.
 - (b) Describe dynamo with neat sketch.
 - (c) Starter dose not disengage after engine starting, list troubles and remedies.
 - (d) Explain fuel injector with neat sketch.
4. Attempt any *two* of the following :— 16
- (a) Describe the various types of maintenance.
 - (b) Describe parallel and series circuit.
 - (c) Explain Ignition coil with neat sketch.
 - (d) Battery doen not charge, list troubles and remedies.
5. Write short notes on (any *four*) :— 16
- (a) Resistance
 - (b) Ohm's law
 - (c) H.D. Bolt
 - (d) Single plate clutch
 - (e) Starting motor.
6. Attempt any *two* of the following :— 16
- (a) Write the safety precautions related to man and machine.
 - (b) Describe fuel filter types.
 - (c) Explain I Head valve mechanism with neat sketch.
 - (d) Draw any four electrical symbol in circuit diagram with their uses.
-