

TED (15) – 4022
(REVISION — 2015)

Reg. No.
Signature

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

AUTOMOBILE ENGINEERING

[Time : 3- hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. Define Air - fuel ratio.
2. List different elements of transmission system.
3. Define Caster.
4. State the use of Air bag in automobiles.
5. State the function of fuel filter.

(5 × 2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. Write notes on governing of IC engine.
2. List any six properties of lubricants.
3. Differentiate between torque converter and fluid coupling.
4. Distinguish between toe in and toe out.
5. Explain three quarter type rear axle.
6. With block diagram explain air brake system.
7. Write short notes on central locking system.

(5 × 6 = 30)

PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks)

UNIT — I

- III (a) Draw the layout of fuel system of a diesel engine and briefly explain its working. 8
- (b) Compare battery coil and magneto coil ignition system. 7

OR

- IV (a) Illustrate the working of a simple carburetor. 8
- (b) Explain the working of bellow type thermostat. 7

UNIT — II

- V (a) Draw four types of stub axles. 8
- (b) With sketch explain the working of a differential. 7

OR

- VI (a) Explain centrifugal clutch with help of neat sketch. 8
- (b) Explain the working principle of Epicyclic gear box. 7

UNIT — III

- VII (a) Sketch a worm and worm sector type steering gear box and explain its working. 8
- (b) Distinguish cross ply and radial ply tyres. 7

OR

- VIII (a) With suitable sketch explain the functioning of disc brake. 8
- (b) State seven objectives of suspension system. 7

UNIT — IV

- IX (a) Explain electronic fuel injection system and draw neat sketch. 8
- (b) List seven pollution control techniques for SI engine. 7

OR

- X (a) Illustrate the working of MPFI. 8
- (b) Discuss various emissions from automobile engine. 7