

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, NOVEMBER - 2022**

AUTOMOBILE ENGINEERING

[Maximum marks: 100]

(Time: 3 Hours)

PART – A

Maximum marks : 10

I (Answer *all* the questions in one or two sentences. Each question carries 2 marks)

1. Define carburetion.
2. List out the different Governing systems.
3. Authorize Epi cyclic gear box.
4. Distinguish tyre size.
5. Enumerate the Applications of inter cooler.

(5 x 2 = 10)

PART – B

Maximum marks : 30

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

1. List various functions of carburettor.
2. Discuss the requirements of a good clutch.
3. Categorise the universal joint and CV joint.
4. Classify the Dynamics of vehicle – yawing, pitching and rolling.
5. Define Fluid coupling.
6. Differentiate the leading and trailing of brake.
7. Describe the Anti lock braking system (ABS)

(5 x 6= 30)

PART – C

Maximum marks : 60

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

UNIT –I

III. (a) Distinguish working of coil ignition and magneto ignition systems.

(9)

(b) Explain the Concept of air fuel ratio for different engine speeds. (6)

OR

IV.(a) Explain the working of thermostat, temperature indicator and water pump in cooling system. (9)

(b) Discuss the characteristics of lubricants and its functions in IC engines. (6)

UNIT-II

V. (a) Illustrate the difference of a single plate and multiplate clutches. (9)

(b) Describe the functions of gear box. (6)

OR

VI. (a) Illustrate the function and working principle of differential. (9)

(b) Describe the semi floating rear axle and three quarter floating axle. (6)

UNIT-III

VII. (a) Illustrate steering geometry – camber, caster and toe in. (9)

(b) Describe about tyre material. (6)

OR

VIII.(a) Explain the functions of a master cylinder, wheel cylinder and brake shoe adjustor. (9)

(b) State the function of suspension system. (6)

UNIT-IV

IX. (a) Illustrate the working of fully automatic transmission system. (9)

(b) Differentiate the working of multi point fuel injection system (MPFI) and common rail direct fuel injection system (CRDI) (6)

OR

X. (a) Explain emissions from automobiles. (9)

(b) Write in detail about roll over protection system and electronic stability control (ESC) in modern automobiles. (6)
