

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/  
COMMERCIAL PRACTICE, APRIL-2021**

**AUTOMOBILE ENGINEERING**

[Maximum marks: 75]

(Time: 2.15 Hours)

**PART – A**

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

1. List any four fuel feed systems used in automobiles.
2. Write any two functions of torque convertor.
3. List any four components in steering system.
4. Define the term bleeding of brakes.
5. Write the Bharat IV standard for a petrol engine. (3 x 2 = 6)

**PART – B**

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

1. Differentiate between air cooling and water cooling systems in automobiles.
2. Write important properties of lubricating oil.
3. Describe the working of a single plate clutch.
4. With the help of a neat diagram explain the working of differential.
5. Write the differences between disc and drum brakes.
6. Write the advantages of MPFI over conventional system.
7. List major protection systems used in automobiles. (4 x 6=24)

**PART – C**

(Answer *any of the three units* from the following. Each full question carries 15 marks)

**UNIT –I**

- III. (a) Define the term carburetion. Briefly explain the working of simple carburettor. (8)
- (b) List the components of a basic fuel supply system in diesel engine and write the functions of each component (7)

**OR**

- IV.(a) With the help of a diagram explain the working of battery ignition system. (8)

- (b) Define the term governing. Write a short note on different types of governing used in IC engines (7)

**UNIT-II**

- V. (a) With the help of a neat diagram explain the working constant mesh gear box. (8)  
(b) State the requirements of a good clutch. (7)

**OR**

- VI. (a) Explain functions of rear axle. Write a short note on different types of rear axles. (8)  
(b) Briefly explain the working of over drive (7)

**UNIT-III**

- VII.(a) Define the terms(i)caster (ii)camber (iii)king pin inclination (iv)toe in. (8)  
(b) Write the advantages of independent suspensions over conventional suspension. (7)

**OR**

- VIII.(a) With the help neat diagram explain the working of pneumatic braking system. (8)  
(b) Differentiate between tube less and tubed tyres. (7)

**UNIT-IV**

- IX. (a) With the help of a neat diagram explain the working CRDI system (8)  
(b) Differentiate between power steering and manual steering. (7)

**OR**

- X. (a) With the help of neat sketches explain the working of air suspension system. (8)  
(b) Write a short note on automatic transmission. List any four advantages of it. (7)

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