



DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2019

AUTOMOBILE ENGINEERING

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. Write any two functions of clutch.
2. Write any two functions of carburetor.
3. List any two properties of lubricants.
4. What is camber in steering geometry ?
5. List any two protection system used in automobiles.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Explain the working of Electronic Control Module (ECM).
2. List the functions of gear box.
3. Distinguish between tubed tyres and tubeless tyres.
4. Explain working of Common Rail Direct Fuel Injection system (CRDI).
5. Explain splash and forced system of lubrication.
6. Compare air cooling and water cooling system.
7. Explain the working of universal joint.

(5×6 = 30)

PART — C
(Maximum marks : 60)

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

UNIT — I

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| III | (a) | Explain the types of Governing system used in IC engines. | 7 |
| | (b) | Explain the working of simple carburetor with sketch. | 8 |

OR

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| IV | (a) | Describe the working of coil ignition system with sketch. | 7 |
| | (b) | Illustrate the fuel system of petrol engine and functions of each componets. | 8 |

UNIT — II

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|---|-----|---|---|
| V | (a) | Describe the working principle of differential with sketch. | 7 |
| | (b) | Describe semi floating rear axle, three quarter floating axle and full floating axle. | 8 |

OR

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| VI | (a) | Explain the working of single plate clutch with sketch. | 7 |
| | (b) | Explain the working of sliding mesh gear box with neat sketch. | 8 |

UNIT — III

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| VII | (a) | Explain the worm and sector type of steering gear. | 7 |
| | (b) | Illustrate mechanical and hydraulic brake system. | 8 |

OR

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| VIII | (a) | Describe with figure, the leaf spring suspension system. | 7 |
| | (b) | Write a note on spoked wheels, disc wheels and cast wheels. | 8 |

UNIT — IV

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| IX | (a) | Explain the working of Multi Point Fuel Injection (MPFI). | 7 |
| | (b) | Explain power steering, central locking and power window. | 8 |

OR

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| X | (a) | Describe the working of electronic ignition system. | 7 |
| | (b) | Explain turbo charger and inter cooler. | 8 |