

Duration : 3 Hours

[Max Marks : 80]

- N.B. : (1) Question No 1 is Compulsory.
(2) Attempt any three questions out of the remaining five.
(3) All questions carry equal marks.
(4) Illustrate your answer with neat sketches wherever necessary.

1 Attempt **any four** from following five questions

- a Differentiate between AWD and 4WD [05]
b Explain Toe-in and Toe- out with a neat sketch. [05]
c Differentiate disc brake system with drum brake system. [05]
d Discuss factors affecting tyre life. [05]
e Explain the process of double declutching [05]

2 a Describe construction and working of constant mesh gearbox. [10]
b Explain working battery ignition system [10]

3 a Explain significance of differential with its construction and working. [10]
b Describe Integral structure and semi-Integral structures of vehicle body. [10]

4 a Describe radial ply tyres and its advantages [10]
b Describe the construction and working of McPherson Strut type of suspension [10]

5 a Explain the construction and working of Lead-acid battery with a neat sketch. [10]
b Explain scope of Artificial Intelligence for automobile application. [10]

6 a Explain rack and pinion steering gear box with a neat sketch. [10]
b Describe the construction and working of Telescopic Shock Absorber [10]