

30/12/2023

Duration: 3hrs

[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 Explain Toe-in and Camber with a neat sketch. [05]
- b Describe Front engine Front Wheel drive with advantages and disadvantages [05]
- c Explain principle of operation of overdrive [05]
- d Discuss factors affecting tyre life. [05]
- e Differentiate disc brake system with drum brake system. [05]

- 2 a Explain the construction and working of Lithium Ion battery. [10]
- b Explain V2V system of communication in passenger cars [10]

- 3 a Explain telescopic shock absorber with a neat sketch. [10]
- b Describe the construction and working of Recirculating Ball type steering gear [10]

- 4 a Describe tubeless tyre with its advantages over the tubed tyre. [10]
- b Describe aerodynamic drag, lift and pitching moments. [10]

- 5 a What is the significance of differential? Describe its construction and working. [10]
- b Describe the construction and working of Double Wishbone type of suspension [10]

- 6 a Describe construction and working of Constant Mesh gearbox. [10]
- b Explain working Electronic ignition system [10]

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