

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.

- Q.1** Write short note on following (**Any Four**)
- a Constant Velocity joint. [05]
 - b Over steer and Under steer [05]
 - c Stub axles [05]
 - d Overdrive [05]
 - e Aerodynamic Drag [05]
- Q. 2**
- a Classify battery and explain Sodium sulphur battery with neat diagram. [10]
 - b State the importance of vehicle body design and explain materials use for vehicle. [10]
- Q. 3**
- a Stating the requirements of suspension, explain Mc-Pherson strut suspension systems in detail. [10]
 - b What are the requirements of starting motors? Explain standard Bendix drive. [10]
- Q. 4**
- a With neat diagram explain construction and working of vacuum operated clutch. [10]
 - b What do you mean by synchromesh device? Explain. [10]
- Q. 5**
- a Explain open, semi-integral and Integral bus structure. [10]
 - b With neat diagram explain construction and working of Tandem Master cylinder. [10]
- Q. 6** Write short note on following. (**Any four**) [20]
- a) Electronic Brake distribution
 - b) Differential
 - c) Dynamo
 - d) Adaptive cruise control
 - e) classification of Tyres
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