

Roll No. ....

**24354**

**B. Tech. (ME) 6th Semester  
(Reappear) Examination – October, 2020**

**AUTOMOBILE ENGINEERING**

**Paper : ME-302-F**

***Time : 1.45 Hours ]***

***[ Maximum Marks : 100***

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Attempt any *three* questions. All questions carry equal marks.

**1. Write short note on :**

- (a) Parts of an automobile
- (b) Overdrive
- (c) King pin Inclination
- (d) Wheel Balancing

2. (a) Explain the various safety features or latest vehicles.  
(b) Explain Wet type of friction clutch in brief with neat sketch.
3. (a) What is four wheel drive vehicles explain ?  
(b) Explain working and construction of centrifugal clutch with neat sketch.
4. Explain the construction working and principle of epicyclic gear box with neat sketch. Also write its application and merits and demerits.
5. (a) What is free wheel unit explain in brief ?  
(b) What is torque tube drive and radius rod explain ?
6. Explain the construction principle, working of a leaf spring with its advantage and disadvantages.
7. Write short notes on :
  - (a) Caster
  - (b) Camber
  - (c) Toe in
  - (d) Toe out

8. (a) Classify the brakes and explain the construction and working of disc brake with neat sketch and also write its advantages and disadvantages.  
(b) What is tyre wear explain its various types.
9. Explain Air injection and Exhaust gas recirculation system in brief.