

(AUTOMOBILE ENGINEERING)

1. (a) What is four wheel drives?
  - (b) Write main function of frame?
  - (c) Discuss factors affecting such design?
  - (d) Compare and contrast advantages of Rear wheel, Front wheel and four wheel drive system?
  - (e) What are the typical condition in which four wheel drives is preferred?
  
2. (a) Write different types of Chassis?
  - (b) What is preventive design of car body?
  - (c) Discuss how body is protected from rust?
  - (d) Explain vehicle aerodynamics.
  - (e) How will you optimization of body shape of an automobile.
  
3. (a) Discuss wheel alignment?
  - (b) What is cornering power?
  - (c) Explain the different angles related to wheel alignment?
  - (d) Discuss the principle of Ackermann linkage?
  - (e) Discuss the effects on steering characteristics of a vehicle.
  
4. (a) Explain the condition for true rolling motion?
  - (b) Explain power steering, slip angle?
  - (c) Differentiate between under steering and over steering?
  - (d) Describe necessary condition for perfect directional stability?
  - (e) What is directional stability of vehicle? How it is achieved in automobile?