

## UNIT-4

### PART- A

1. Define wheel track and wheel base.
2. Give a brief note on damper.
3. Distinguish between disc brake with drum brake.
4. What is meant by bleeding of brakes?
5. Define steering gear.
6. What are the four types of wheels?
7. What is the purpose of Toe-in and Toe-out?
8. What are the different types of tyres used in automobile?
9. What are the different types of springs used in suspension system?
10. Define kingpin inclination.
11. Give the function of tyre?
12. Define caster and camber.
13. What are the benefits of anti-lock brake system?

### Part B

14. (i) Sketch and explain various steering geometries. (8)  
(ii) Explain with the help of simple diagram the different types of stub axles. (8)
15. Explain the working principles of hydraulic brake with neat sketch. (16)
- 16 (i) Explain a typical power steering system. (8)  
(ii) Explain the wheel alignment system. (8)
17. (i) Explain any one type of steering gear box with neat sketch. (12)  
(ii) What is the necessity of a steering gear? (4)
18. Explain the steering geometry with neat sketch. (16)
- 19 Explain the working of power steering with neat sketch. (16)
20. (i) Explain the Ackerman principle of steering with neat sketch. (10)  
(ii) Explain the working of torsion bar with neat sketch. (6)
- 21 (i) Explain the working of rear independent suspension system with neat sketch. (8)  
(ii) Explain the working of front independent suspension system with neat sketch. (8)
- 22 (i) Explain the working of shock absorber with neat sketch. (8)  
(ii) What are the objectives and components of suspension system. (8)
23. Explain the mechanical brakes with neat sketch. (16)
24. Explain the pneumatic or air brakes with neat sketch. (16)



