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Code: 3703

1. What is the steering linkage ratio if the pitman arm length twice of steering arm length?

- A) 02:01
B) 02:01 (Incorrect)
C) 01:02
D) 02:03

2. What is the average power steering gear ratio followed in general?

- A) 40% less than manual steering (Incorrect)
B) Equal to manual steering
C) 20% less than manual steering
D) 10% more than manual steering

3. What is the range of steering ratio available in general?

- A) 8 : 2 to 22 : 2
B) 11 : 2 to 22 : 2
C) 11 : 1 to 24 : 1 (Correct)
D) 10 : 1 to 18 : 1

4. What is the maximum air pressure supplied by the compressor in the air suspension system?

- A) 100 to 115 PSI
B) 180 to 210 PSI
C) 120 to 125 PSI (Correct)
D) 200 to 215 PSI

5. What is the aspect ratio in the tyre structure?

- A) Percentage ratio of tyre height to Rim width
B) Ratio between tyre height to tyre dia (Incorrect)
C) Percentage ratio of tyre height to tyre width
D) Ratio between tyre width to Rim width

6. Which part of tyre referred as 'Crown'?

- A) Thread width
B) Rim width
C) Tyre width
D) Thread radius (Correct)

7. What does the no: 14PR denotes in the tyre specification 9? x 14 - 14PR?

- A) Shoulder width
B) Bead circle dia
C) Ply rating (Correct)
D) Tyre thickness

8. How the tyre is specified?

- A) Shoulder width, Boad circle dia. Ply rating (Correct)
B) Shoulder dia, Bead circle dia, Ply rating
C) Shoulder width, Tyre thickness
D) Ply rating, tyre inner circle dia, shoulder width

9. Which type of wheel consist two separate discs are clamped together?

- A) Split wheel
B) Wire wheel (Incorrect)
C) Disc wheel
D) Heavy vehicle

10. Which advantage does not suit to wheel alignment?

- A) Minimise tyre wear
B) Reduce driver effort
C) Achieve self centering after turning
D) Achieve easy torque transmission (Correct)

11. Which steering system will provide assistance even when the engine is not running?

- A) Integral power steering (Incorrect)
B) Linkage power steering
C) Electronic power steering
D) Manual steering

12. Which part of integral power steering reduce fluid pressure?

- A) Torsion bar
B) Rotary valve
C) Unloading valve (Correct)
D) Flow control valve

13. What is the role of recirculating balls in the integral power steering?

- A) Affect steering stability
B) Prevent control in event of hydraulic failure
C) Combine high mechanical efficiency with smooth operation (Correct)
D) Provide hard steering

14. Which is not the benefit of power steering?

- A) Effort less steering (Incorrect)
B) Quick response
C) Absolute control during driving
D) Positive breaking system

15. Why light weight cars use low steering ratio?

- A) To obtain low steering effect
B) To obtain large steering effect
C) To obtain constant steering effect (Incorrect)
D) To obtain no steering effect

16. Which angle helps in self centering of wheels after negotiating a turn?

- A) Castor angle
B) King pin inclination (Correct)
C) Camber angle
D) Included angle

17. What is the purpose of castor in wheel alignment?

A) Maintain directional stability and control

B) Reduce tyre wear

C) Reduce abnormal vibration

D) Convert steering torque input into voltage signal
(Incorrect)

18. What is the advantage of using non reactive suspension arrangement on multi-axle vehicles?

A) Good braking efficiency in both rear wheels
(Correct)

B) Better riding comfort

C) Increased spring life

D) Prevention of rattling

19. Which type of independent suspension system simple in construction and allow more deflection of the front wheel without effect on the steering?

A) Torsion bar suspension

B) Strut type suspension
(Correct)

C) Coil spring suspension

D) Conventional suspension

20. Which part of coil spring allows angular movement of linkages?

A) Ball joint

B) Stabiliser bar

C) Torsion bar (Incorrect)

D) Lower control arm

21. Which type of spring suspension responds quickly to road shocks? |

A) Compression spring

B) Coil spring (Correct)

C) Helical spring

D) Transverse spring

22. Which type of shock absorber maintain vehicle ride at a pre - set level according to the load placed over the rear axle?

A) Gas pressurised shock absorber (Incorrect)

B) Hydraulic shock absorber

C) Automatic load adjustable shock absorber

D) Mechanical shock absorber

23. Which type of shock absorber absorbs shocks with the help of friction disc and spring?

A) Hydraulic type (Incorrect)

B) Electrical type

C) Mechanical type

D) Pneumatic type

24. Which device in the air suspension system observe vibration of low amplitude and high frequency?

A) Shock absorber

B) Suspension spring

C) Air bags in the system

D) Leaf spring (Incorrect)

25. What is the disadvantage of independent suspension system?

A) More maintenance cost
(Correct)

B) Vibration damping is less effective

C) Shocks transmitted from one wheel to other

D) Spring weight is more

26. What is the advantage of using independent suspension system?

A) This is simple arrangement

B) Shocks are transmitted from one wheel to other

C) Spring weight is less

D) Maintenance cost is less
(Incorrect)

27. What is the advantage of using nitrogen in the tyres?

A) Provide positive road grip

B) Increase the tyre life

C) Provide cushioning effect on the vehicle

D) Observe shocks and vibration (Incorrect)

28. What is the use of compact spare tyres?

A) Used for breakdown

B) Used for high altitude

C) Withstand heavy load
(Incorrect)

D) Withstand high temperature

29. Which rating indicate the braking capabilities of the tire to the consumer?

A) Ply rating

B) Tyre rating

C) Traction rating

D) Temperature rating
(Incorrect)

30. What is the advantage of using run flat tyres?

A) Less cost and maintenance

B) Eliminate need for spare tyre and jack

C) Resist vibration (Incorrect)

D) Provide equal distribution of load

31. What will effect in case of over inflated tyres?

A) Tyre will wearout at centre

B) Tyre will wear out at edges

C) Tyre will crack at edges
(Incorrect)

D) Tyre will crack at centre

32. What is the purpose of beads and plies provided in the tyre?

A) Provide strength to tyre
(Correct)

B) Provide grippiness on the surface

C) Prevent tyre slip

D) Resist vibration

33. What is the function of Rim in the wheel construction?

A) Support the axle
(Incorrect)

B) Provides balancing of vehicle

C) Holds the tyre in correct position

D) Distribute the load equally

34. What is the purpose of spokes provided in the wheel?

- A) Provide accurate rounds of rim** B) Distribute pre load evenly (Incorrect)
C) Provide directional stability of vehicle D) Support the chassis frame of vehicle

35. When the driver is warned of difference in tyre pressure?

- A) Difference in pressure exceeds 30%** B) Difference in pressure more than 10%
C) Difference in pressure more than 20% D) Difference in pressure exceeds 40% (Incorrect)

36. What will be the effect of negative camber excessive in the wheel alignment?

- A) Outer edge of tyre wearout faster B) Centre of tyre wearout faster
C) Inner edge of tyre wear out faster (Correct) D) Cracks developed in the tyre tread

37. How to rectify the defect of noise in hydraulic steering?

- A) Replace the with new fluid B) **Fill fluid to correct level and bleed the system**
C) Adjust the torsion bar linkage D) Replace the flow control valve (Incorrect)

38. What is the cause of noise in steering?

- A) High fluid level B) **Presence of air in the fluid**
C) Defective flow control valve D) Defective torsion bar (Incorrect)

39. Why vibration damper are not used inside the helical spring?

- A) Possibility of stuck in one position B) Not economical
C) Fitting and removing time consuming (Correct) D) No effect on load carrying capacity

40. What will be the effect of negative scrub radius?

- A) Wheel is caused to toe - out B) Wheel is kept in straight position
C) The tyre centre portion wear out D) **Wheel is caused to toe - in (Correct)**

41. What causes abnormal tyre wear, tyre slip and poor steering stability?

- A) Incorrect toe - in and toe - out (Correct)** B) Malfunctioning of torsion bar
C) Presence of air in the break fluid D) Front axle bend/twist

42. What will be effect of unequal castor in the vehicle?

- A) Vehicle pull to one side wheel** B) Vehicle will not move (Incorrect)
C) Driver have to use less effort on steering D) Increase steering stability

43. Why rubber buffer is provided in the main spring of suspension system?

- A) Transfer pay load smoothly B) **Protect chassis frame from heavy jerk (Correct)**
C) Transfer the load equally D) Provide steering control stability

44. Which factor affecting suspension?

- A) Damaged chassis frame B) **Wornout spring**
C) More shocks, uncomfortable riding (Incorrect) D) Abnormal tyre wear

45. What will be the result of improper brake adjustment?

- A) Hard steering B) Wheel wobbling
C) Steering wheel play (Incorrect) D) **Vehicle pulling to one side**

46. What is the reason of steering wheel play excess?

- A) Improper pre load defective steering (Correct)** B) Low oil level
C) Drop in pressure D) Wornout sealing rings

47. What is the cause of 'Wheel wobbling'?

- A) Improper tyre pressure B) **King pin wornout (Correct)**
C) Drop in pressure D) Wrong hose size

48. Why tyre wear found abnormal in the vehicle?

- A) Loose wheel nut B) Improper linkage adjustment (Incorrect)
C) Improper tol-in and tol - out D) Improper tyre pressure

49. What causes the defect of ?Hard steering? in the hydraulic power steering system?

- A) Improper position of drop arm B) Tie rod loose fitting
C) Band axle beam (Correct) D) Improper size of tyre

50. What causes 'Air suction' in pump of hydraulic power steering system?

- A) Noise** B) High fluid level
C) Low pressure D) Steering wheel play (Incorrect)