

February 2026

Answer Key

Duration: 120 Mins**Total Marks: 76****Q.ID: ITISKILL9295WU**

1. What is the cause of 'Poor self centering' in a vehicle?

- A) Improper wheel alignment
 B) Loose wheel level
 C) Filter chocked
 D) Low oil level

Answer: A) Improper wheel alignment

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

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

Answer: A) 11 : 1 to 24 : 1

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

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

Answer: B) Vehicle pulling to one side

4. What is the disadvantage of rigid axle suspension system?

- A) Maintenance cost is more
 B) Vibration damping is less effective
 C) This is a complicated arrangement
 D) Spring weight is less

Answer: B) Vibration damping is less effective

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

- A) Provides balancing of vehicle
 B) Holds the tyre in correct position
 C) Support the axle
 D) Distribute the load equally

Answer: B) Holds the tyre in correct position

6. Which type of spring will have good load carrying capacity and do not have noise in the suspension system?

- A) Multiple - leaf spring
 B) Coil spring
 C) Monoleaf springs
 D) Fibre composite springs

Answer: A) Multiple - leaf spring

7. Which is not the benefit of power steering?

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

Answer: A) Positive breaking system

8. What is the purpose of air suspension?

- A) Used for leveling purpose
 B) Increase the directional stability

- C) Reduce the suspension weight
 D) Reduce the space occupation

Answer: A) Used for leveling purpose

9. What is the effect of weak suspension?

- A) Vibration damping is more effective
 B) Unequal weight distribution of weight
 C) Carrying excessive payload of vehicle
 D) Directional unstability of vehicle

Answer: D) Directional unstability of vehicle

10. What is the cause of noise in steering?

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

Answer: C) Presence of air in the fluid

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

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

Answer: C) King pin inclination

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

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

Answer: C) Inner edge of tyre wear out faster

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

- A) Reduce tyre wear
 B) Reduce abnormal vibration
 C) Maintain directional stability and control
 D) Convert steering torque input into voltage signal

Answer: C) Maintain directional stability and control

14. Where the tyre pressure sensor secured in the wheel assembly?

- A) Bolted to metal valve
 B) Secured in the tyre outer edges
 C) Secured in the wheel hub
 D) Bolted to the rim centre

Answer: A) Bolted to metal valve

15. Which type of wheel consist two separate discs are

clamped together?

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

Answer: A) Split wheel

16. What is the advantage of electronic power steering?

- A) Less occupation of space
- B) Number of components are less
- C) Energy being consumed only while steering
- D) Compact in size

Answer: C) Energy being consumed only while steering

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

- A) Tyre rating
- B) Temperature rating
- C) Ply rating
- D) Traction rating

Answer: D) Traction rating

18. Why tyre wear found abnormal in the vehicle?

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

Answer: D) Improper tol-in and tol - out

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

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

Answer: D) Band axle beam

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

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

Answer: A) Provide accurate rounds of rim

21. What is the main cause for wear on one side of tyre?

- A) Under inflation
- B) Improper camber
- C) Improper caster
- D) Over inflation

Answer: B) Improper camber

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

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

Answer: B) Thread radius

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

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

Answer: D) King pin wornout

24. What is the disadvantage of excessive positive camber in the wheel alignment?

- A) Tyre bleeding wire wear out
- B) Tyre outer edge will wearout fast
- C) Tyre centre will wearout
- D) Tyre thread wear out

Answer: B) Tyre outer edge will wearout fast

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

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

Answer: A) Improper pre load defective steering

26. What is the name of distance between most protruding portions on both sides of tyre?

- A) Tyre width
- B) Thread radius
- C) Tyre height
- D) Tyre outer diameter

Answer: A) Tyre width

27. Which device in electronic power steering converts the steering torque input and its direction in to voltage signals?

- A) Torque sensor
- B) Hall effect sensor
- C) Rotation sensor
- D) Temperature sensor

Answer: A) Torque sensor

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

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

Answer: A) Fill fluid to correct level and bleed the system

29. What is the advantage of coil spring?

- A) Good load carrying capacity
- B) Provide greater pay load
- C) Low space requirement
- D) High steering and stability

Answer: C) Low space requirement

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

- A) Air bags in the system
- B) Leaf spring
- C) Suspension spring
- D) Shock absorber

Answer: D) Shock absorber

31. How the tyre is specified?

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

Answer: D) Shoulder width, Boad circle dia. Ply rating

32. Which advantage does not suit to wheel alignment?

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

Answer: B) Achieve easy torque transmission

33. 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) Coil spring suspension
- C) Strut type suspension
- D) Conventional suspension

Answer: C) Strut type suspension

34. Where the airbags are located in the air suspension system?

- A) Between air pressure regulator and front axle
- B) Between frame and vehicle axle
- C) Between brake tank and vehicle axle
- D) Between high control valve and frame

Answer: B) Between frame and vehicle axle

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

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

Answer: B) 20% less than manual steering

36. What is the recommended valve of combined angle in the steering system?

- A) 9 - 10 Degree
- B) 15 - 18 Degree
- C) 5 - 8 Degree
- D) 12 - 15 Degree

Answer: A) 9 - 10 Degree

37. Which type of suspension spring can not transfer wheel guidance forces?

- A) Leaf springs
- B) Compression springs
- C) Coil springs
- D) Helical springs

Answer: D) Helical springs

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

- A) Less cost and maintenance
- B) Provide equal distribution of load
- C) Resist vibration
- D) Eliminate need for spare tyre and jack

Answer: D) Eliminate need for spare tyre and jack

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

- A) Mechanical type
- B) Hydraulic type
- C) Pneumatic type
- D) Electrical type

Answer: A) Mechanical type

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

- A) Automatic load adjustable shock absorber
- B) Gas pressurised shock absorber
- C) Hydraulic shock absorber
- D) Mechanical shock absorber

Answer: A) Automatic load adjustable shock absorber

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

- A) Increase the tyre life
- B) Provide positive road grip
- C) Observe shocks and vibration
- D) Provide cushioning effect on the vehicle

Answer: A) Increase the tyre life

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

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

Answer: A) 120 to 125 PSI

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

- A) Compression spring
- B) Transverse spring
- C) Coil spring
- D) Helical spring

Answer: C) Coil spring

44. What is the disadvantage of independent suspension system?

- A) More maintenance cost
- B) Vibration damping is less effective
- C) Shocks transmitted from one wheel to other
- D) Spring weight is more

Answer: A) More maintenance cost

45. What is the reason of faster wear out of tyre edges?

- A) Over inflated tyre
- B) Defective suspension system
- C) Under inflated tyre
- D) Unequal load distribution

Answer: C) Under inflated tyre

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

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

Answer: B) Incorrect toe - in and toe - out

47. What is the use of compact spare tyres?

- A) Withstand heavy load B) Withstand high temperature
C) Used for breakdown D) Used for high altitude

Answer: C) Used for breakdown

48. Which type of suspension spring made of fibre glass, laminated and bonded together by tough polyster resins?

- A) Multiple leaf springs B) Fiber composite springs
C) Coil springs D) Monoleaf springs

Answer: B) Fiber composite springs

49. Which is the heart of integral power steering system?

- A) Unloading valves B) Rotary control valve
C) Flow control valve D) Pressure relief valve

Answer: B) Rotary control valve

50. Which system provided between axles and chassis frame?

- A) Suspension system B) Cooling system
C) Braking system D) Steering system

Answer: A) Suspension system

51. Which factor affecting suspension?

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

Answer: D) Wornout spring

52. What is the cause of low pressure in the hydraulic power steering system?

- A) Wornout sealing ring B) Wrong flow control valve setting
C) Low oil level D) Air in the system

Answer: B) Wrong flow control valve setting

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

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

Answer: A) Wheel is caused to toe - in

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

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

Answer: A) Unloading valve

55. Which is not the function of suspension system?

- A) It gives cushioning effects B) It maintains body level
C) It increase steering stability D) It transfer braking torque to the chassis

Answer: C) It increase steering stability

56. Why light weight cars use low steering ratio?

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

Answer: C) To obtain large steering effect

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

- A) Maintenance cost is less B) Spring weight is less
C) This is simple arrangement D) Shocks are transmitted from one wheel to other

Answer: B) Spring weight is less

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

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

Answer: A) Electronic power steering

59. How the tyre height is calculated?

- A) Rim dia - tyre outer dia B) Tyre width + Bead circle dia
C) Tyre outer dia - Rim dia D) Thread width + Tyre width

Answer: C) Tyre outer dia - Rim dia

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

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

Answer: B) Combine high mechanical efficiency with smooth operation

61. Which part of electronic power steering revert back to manual steering in case of failure in power steering?

- A) Fail safe relay B) Current controller
C) Phase compensator D) Solenoid valve

Answer: A) Fail safe relay

62. 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 D) Tyre will crack at centre

Answer: A) Tyre will wearout at centre

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

- A) Increased spring life B) Prevention of ratting

C) Good braking efficiency in both rear wheels
D) Better riding comfort

Answer: C) Good braking efficiency in both rear wheels

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

- A) Torsion bar
B) Ball joint
C) Stabiliser bar
D) Lower control arm

Answer: B) Ball joint

65. Why the alternate spokes are screwed to slope forward and backward towards the rim in the wire wheel?

- A) To observe braking and driving torque
B) To provide cushioning effect
C) To distribute the load evenly
D) To take the uneven load

Answer: A) To observe braking and driving torque

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

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

Answer: A) Noise

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

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

Answer: D) 01:02

68. Which type of shock absorber is easy for replacement and handling?

- A) Mechanical type
B) Vane type
C) Piston type
D) Telescopic type

Answer: D) Telescopic type

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

- A) Prevent tyre slip
B) Provide grippness on the surface
C) Provide strength to tyre
D) Resist vibration

Answer: C) Provide strength to tyre

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

A) Shoulder width

C) Tyre thickness

B) Bead circle dia

D) Ply rating

Answer: D) Ply rating

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

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

Answer: B) Difference in pressure exceeds 30%

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

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

Answer: C) Vehicle pull to one side wheel

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

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

Answer: B) Fitting and removing time consuming

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

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

Answer: D) Protect chassis frame from heavy jerk

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

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

Answer: A) Percentage ratio of tyre height to tyre width

76. What is the impact of larger scrub radius?

- A) Bending of steering linkage point
B) Wear on the outer edge of tyre
C) Wear on the centre part of tyre
D) Unequal braking on the front wheel

Answer: D) Unequal braking on the front wheel