

February 2026

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Answer Key

Duration: 180 Mins

Total Marks: 76

Q.ID: ITISKILL0468UH

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

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

Answer: A) Bolted to metal valve

2. What is the impact of larger scrub radius?

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

Answer: B) Unequal braking on the front wheel

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

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

Answer: D) To observe braking and driving torque

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

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

Answer: D) Ball joint

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

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

Answer: D) Difference in pressure exceeds 30%

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

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

Answer: D) Inner edge of tyre wear out faster

7. What is the recommended value of combined angle in the steering system?

- A) 9 - 10 Degree B) 15 - 18 Degree

C) 12 - 15 Degree

D) 5 - 8 Degree

Answer: A) 9 - 10 Degree

8. Which factor affecting suspension?

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

Answer: A) Wornout spring

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

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

Answer: B) Increase the tyre life

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

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

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

11. What is the advantage of coil spring?

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

Answer: D) Low space requirement

12. What is the purpose of air suspension?

- A) Reduce the suspension weight B) Used for leveling purpose
C) Reduce the space occupation D) Increase the directional stability

Answer: B) Used for leveling purpose

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

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

Answer: D) Traction rating

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

- A) Tyre outer diameter B) Tyre width

C) Tyre height

D) Thread radius

Answer: B) Tyre width

C) Helical spring

D) Coil spring

Answer: D) Coil spring

15. 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

23. What is the use of compact spare tyres?

A) Withstand heavy load

B) Used for high altitude

C) Withstand high temperature

D) Used for breakdown

Answer: D) Used for breakdown

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

A) 120 to 125 PSI

B) 180 to 210 PSI

C) 200 to 215 PSI

D) 100 to 115 PSI

Answer: A) 120 to 125 PSI

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

A) Provide grippness on the surface

B) Resist vibration

C) Provide strength to tyre

D) Prevent tyre slip

Answer: C) Provide strength to tyre

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

A) Driver have to use less effort on steering

B) Increase steering stability

C) Vehicle will not move

D) Vehicle pull to one side wheel

Answer: D) Vehicle pull to one side wheel

25. What is the effect of weak suspension?

A) Directional unstability of vehicle

B) Carrying excessive payload of vehicle

C) Vibration damping is more effective

D) Unequal weight distribution of weight

Answer: A) Directional unstability of vehicle

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

A) Support the axle

B) Provides balancing of vehicle

C) Distribute the load equally

D) Holds the tyre in correct position

Answer: D) Holds the tyre in correct position

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

A) Fiber composite springs

B) Coil springs

C) Multiple leaf springs

D) Monoleaf springs

Answer: A) Fiber composite springs

19. What is the cause of noise in steering?

A) High fluid level

B) Defective torsion bar

C) Presence of air in the fluid

D) Defective flow control valve

Answer: C) Presence of air in the fluid

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

A) Rim width

B) Thread width

C) Thread radius

D) Tyre width

Answer: C) Thread radius

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

A) Prevention of ratting

B) Increased spring life

C) Better riding comfort

D) Good braking efficiency in both rear wheels

Answer: D) Good braking efficiency in both rear wheels

28. Why light weight cars use low steering ratio?

A) To obtain large steering effect

B) To obtain no steering effect

C) To obtain constant steering effect

D) To obtain low steering effect

Answer: A) To obtain large steering effect

21. 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

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

A) 10% more than manual steering

B) 40% less than manual steering

C) 20% less than manual steering

D) Equal to manual steering

Answer: C) 20% less than manual steering

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

A) Compression spring

B) Transverse spring

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

A) Loose wheel level

B) Improper wheel alignment

C) Low oil level

D) Filter chocked

Answer: B) Improper wheel alignment

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

- A) Tyre will crack at edges
- B) Tyre will wear out at edges
- C) Tyre will crack at centre
- D) Tyre will wearout at centre

Answer: D) Tyre will wearout at centre

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

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

Answer: D) King pin inclination

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

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

Answer: A) Under inflated tyre

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

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

Answer: A) Between frame and vehicle axle

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

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

Answer: B) King pin wornout

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

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

Answer: B) Automatic load adjustable shock absorber

37. Which advantage does not suit to wheel alignment?

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

Answer: C) Achieve easy torque transmission

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

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

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

39. What is the disadvantage of independent suspension system?

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

Answer: A) More maintainance cost

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

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

Answer: D) Maintain directional stability and control

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

- A) Coil spring suspension
- B) Conventional suspension
- C) Torsion bar suspension
- D) Strut type suspension

Answer: D) Strut type suspension

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

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

Answer: A) Unloading valve

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

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

Answer: B) Eliminate head for spare tyre and jack

44. Which system provided between axles and chassis frame?

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

Answer: C) Suspension system

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

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

Answer: D) Electronic power steering

46. What is the advantage of using independent suspension

system?

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

Answer: B) Spring weight is less

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

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

Answer: D) 01:02

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

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

Answer: D) Fail safe relay

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

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

Answer: D) Vehicle pulling to one side

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

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

Answer: A) Split wheel

51. Why tyre wear found abnormal in the vehicle?

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

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

52. What is the advantage of electronic power steering?

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

Answer: B) Energy being consumed only while steering

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

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

Answer: D) Band axle beam

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

- A) Rotary control valve
- B) Flow control valve

- C) Unloading valves
- D) Pressure relief valve

Answer: A) Rotary control valve

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

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

Answer: C) Wrong flow control valve setting

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

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

Answer: D) Torque sensor

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

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

Answer: C) Combine high mechanical efficiency with smooth operation

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

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

Answer: B) Noise

59. 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

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

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

Answer: C) Fitting and removing time consuming

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

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

Answer: A) Ply rating

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

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

Answer: D) Wheel is caused to toe - in

63. How the tyre height is calculated?

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

Answer: A) Tyre outer dia - Rim dia

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

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

Answer: A) Protect chassis frame from heavy jerk

65. Which is not the function of suspension system?

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

Answer: C) It increase steering stability

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

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

Answer: B) Shock absorber

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

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

Answer: B) Helical springs

68. Which is not the benefit of power steering?

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

Answer: A) Positive breaking system

69. 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

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

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

Answer: A) Mechanical type

71. How the tyre is specified?

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

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

72. What is the disadvantage of excessive positive camber in the wheel asignment?

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

Answer: A) Tyre outer edge will wearout fast

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

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

Answer: A) Multiple - leaf spring

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

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

Answer: A) 11 : 1 to 24 : 1

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

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

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

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

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

Answer: C) Improper camber