

February 2026

Answer Key

Duration: 120 Mins**Total Marks: 93****Q.ID: ITISKILL9388V6**

1. 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

2. What is the advantage of coil spring?

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

Answer: A) Low space requirement

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

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

Answer: D) Fiber composite springs

4. Which is not the function of suspension system?

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

Answer: A) It increase steering stability

5. What is the purpose of brake proportioning valves in the braking system?

- A) Provide balanced braking B) Increase braking efficiency
C) Reduces brake pedal effort D) Prevent front wheel lockup

Answer: A) Provide balanced braking

6. Where the non-return valve is located in the centre feed master cylinder?

- A) On the pistons head B) On the bypass port
C) On the cylinder head D) On the reservoir

Answer: A) On the pistons head

7. 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

8. Which type of suspension spring can not transfer wheel

guidance forces?

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

Answer: B) Helical springs

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

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

Answer: D) Ball joint

10. How the tyre is specified?

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

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

11. What causes the deffect of ?Hard steering? in the hydraulic power steering system?

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

Answer: B) Band axle beam

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

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

Answer: B) Mechanical type

13. 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

14. 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

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

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

Answer: C) Difference in pressure exceeds 30%

16. Which material is used for brake rotors and brake pads for aircraft and racing cars?

- A) Carbon fiber reinforced carbon composite B) Copper, brass, steel
C) Sintered alloy D) Asbestos

Answer: A) Carbon fiber reinforced carbon composite

17. What is the use of compact spare tyres?

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

Answer: D) Used for breakdown

18. Which system provided between axles and chassis frame?

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

Answer: C) Suspension system

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

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

Answer: A) Vehicle pull to one side wheel

20. Which is not the benefit of power steering?

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

Answer: D) Positive breaking system

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

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

Answer: B) Tyre will wearout at centre

22. Which device detect the driven wheel spin through sensor?

- A) ELSD B) ECU
C) EBD D) TCS

Answer: B) ECU

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

- A) Heavy vehicle B) Disc wheel

- C) Wire wheel D) Split wheel

Answer: D) Split wheel

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

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

Answer: A) Telescopic type

25. What is the purpose of air suspension?

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

Answer: A) Used for leveling purpose

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

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

Answer: B) Electronic power steering

27. 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

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

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

Answer: A) Provide accurate rounds of rim

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

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

Answer: C) Rotary control valve

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

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

Answer: B) Noise

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

- A) No effect on load carrying capacity B) Not economical

- C) Possibility of stuck in one position
D) Fitting and removing time consuming

Answer: D) Fitting and removing time consuming

32. What is the function of EBD (Electronic Brake - Force Distribution) in anti lock brake system?

- A) It control the slip of the front wheel
B) It improve directional stability of vehicle
C) It controls the slip of the rear wheel
D) It increase brake pressure to the rear wheel

Answer: C) It controls the slip of the rear wheel

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

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

Answer: B) Automatic load adjustable shock absorber

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

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

Answer: C) King pin wornout

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

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

Answer: C) Under inflated tyre

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

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

Answer: D) Vibration damping is less effective

37. How the EBD (Electronic Brake Force Distribution) failure indicated to the driver?

- A) Flickering the tail lamp
B) Glowing the parking lamp
C) Peep sound in the cabin
D) Indication lamp the dash board

Answer: B) Glowing the parking lamp

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

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

Answer: A) Eliminate head for spare tyre and jack

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

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

Answer: A) 120 to 125 PSI

40. What is the brake pedal free play range permitted while adjusting?

- A) 8 mm to 10 mm
B) 13 mm to 18 mm
C) 6 mm to 12 mm
D) 4 mm to 8 mm

Answer: C) 6 mm to 12 mm

41. 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

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

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

Answer: A) Wheel is caused to toe - in

43. What is the impact of larger scrub radius?

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

Answer: A) Unequal braking on the front wheel

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

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

Answer: D) Improper camber

45. What is the advantage of TCS/ELSD brake circuit of wheel?

- A) Reduce fluid pressure
B) Automatic adjustment of engine torque to the grip rates
C) Reduce the pressure at wheel cylinder
D) Avoid wheel lockup by releasing pressure

Answer: B) Automatic adjustment of engine torque to the grip rates

46. 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

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

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

Answer: C) Wrong flow control valve setting

48. What is the material used to make brake drum?

- A) High speed steel
- B) Stainless steel
- C) Special type castiron
- D) High carbon steel

Answer: C) Special type castiron

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

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

Answer: B) Ply rating

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

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

Answer: A) Torque sensor

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

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

Answer: D) Spring weight is less

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

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

Answer: A) 20% less than manual steering

53. What is the permitted brake pedal travel in the hydraulic brake system?

- A) 2 to 12 mm
- B) 6 to 12 mm
- C) 7 to 12 mm
- D) 9 to 12 mm

Answer: C) 7 to 12 mm

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

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

Answer: C) Coil spring

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

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

Answer: D) Between frame and vehicle axle

56. What is the disadvantage of independent suspension system?

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

Answer: B) More maintanance cost

57. 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

58. 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
- D) 10 : 1 to 18 :1

Answer: C) 11 : 1 to 24 : 1

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

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

Answer: A) Tyre width

60. What is the cause of noise in steering?

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

Answer: D) Presence of air in the fluid

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

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

Answer: B) Inner edge of tyre wear out faster

62. Why tyre wear found abnormal in the vehicle?

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

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

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

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

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

64. What is the advantage of electronic power steering?

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

Answer: D) Energy being consumed only while steering

65. What is the effect of weak suspension?

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

Answer: D) Directional unstability of vehicle

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

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

Answer: C) Improper pre load defective steering

67. What is the material constituent of semi metallic brake lining?

- A) Carbon fiber
 B) Carbon composite
 C) Aluminium oxide
 D) Fine polished steel wool

Answer: D) Fine polished steel wool

68. How the tyre height is calculated?

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

Answer: C) Tyre outer dia - Rim dia

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

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

Answer: C) Tyre outer edge will wearout fast

70. What is the purpose of beads and plys provided in the

tyre?

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

Answer: B) Provide strength to tyre

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

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

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

72. What is the function of traction control system?

- A) Reduce steering effort
 B) Prevent wheel spinning
 C) Release the pressure to expansion tank
 D) Reduce the engine torque

Answer: B) Prevent wheel spinning

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

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

Answer: B) 01:02

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

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

Answer: B) Holds the tyre in correct position

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

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

Answer: D) Protect chassis frame from heavy jerk

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

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

Answer: A) 9 - 10 Degree

77. Which device permits air to the air brake system?

- A) Spring brake actuator
 B) System protection valve
 C) Brake valve
 D) Hand control valve

Answer: C) Brake valve

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

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

Answer: A) Maintain directional stability and control

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

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

Answer: A) King pin inclination

80. 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

81. What is the precautionary measures to be adapted while removing secondary piston to prevent damage

- A) Remove the circlip before
B) Remove the stopper bolt before
C) Remove the retaining spring before
D) Remove the return spring before

Answer: B) Remove the stopper bolt before

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

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

Answer: C) Thread radius

83. What is the purpose of 'G' sensor

- A) Reduce pressure at wheel cylinder
B) Locking pressure inside wheel cylinder
C) Detect wheel lock up condition
D) Measuring deceleration rate of vehicle

Answer: D) Measuring deceleration rate of vehicle

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

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

Answer: B) Vehicle pulling to one side

85. Which factor affecting suspension?

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

Answer: B) Wornout spring

86. What is the binding material used in organic brake lining?

- A) Mica
B) Resin
C) Fibre glass
D) Asbestos

Answer: B) Resin

87. 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

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

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

Answer: D) Traction rating

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

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

Answer: C) Multiple - leaf spring

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

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

Answer: B) To observe braking and driving torque

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

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

Answer: C) Strut type suspension

92. Which principle is applicable for hydraulic brakes?

- A) Newton's law of motion
B) Pascal's law
C) Hooke's law
D) Boyle's law

Answer: B) Pascal's law

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

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

Answer: B) Bolted to metal valve