ITI Quiz - 27-Feb-2026 10:28 AM

Q. ID: ITISKILL0405I3

February 2026

Answer Key

Duration: 30 Mins **Total Marks: 93** **Q.ID: ITISKILL0405I3**

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

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

Answer: A) 9 - 10 Degree

2. 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

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

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

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

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

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

Answer: A) Shock absorber

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

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

Answer: D) Improper wheel alignment

6. Which system provided between axles and chassis frame?

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

Answer: C) Suspension system

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

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

Answer: A) Glowing the parking lamp

8. Which type of suspension spring can not transfer wheel guidence forces?

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

Answer: C) Helical springs

9. What will be the effect of negative scrub radious?

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

Answer: C) Wheel is caused to toe - in

10. What is the purpose of beads and plys provided in the tyre?

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

Answer: D) Provide strength to tyre

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

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

Answer: C) Band axle beam

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

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

Answer: B) Maintain directional stability and control

13. What is the purpose of 'G' sensor

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

Answer: B) Measuring deceleration rate of vehicle

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

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

Answer: D) 6 mm to 12 mm

15. What is the advantage of coil spring?

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

Answer: A) Low space requirement

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

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

Answer: C) Betweeen frame and vehicle axle

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

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

Answer: C) Difference in pressure exceeds 30%

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

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

Answer: C) Mechanical type

19. 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 return spring before
D) Remove the retaining spring before

Answer: B) Remove the stopper bolt before

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

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

Answer: C) Protect chassis frame from heavy jerk

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

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

Answer: C) Unloading valve

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

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

Answer: A) Fine polished steel wool

23. How the tyre is specified?

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

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

24. What is the use of compact spare tyres?

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

Answer: C) Used for breakdown

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

A) Good braking efficiency in both rear wheels
B) Better riding comfort
C) Prevention of ratting
D) Increased spring life

Answer: A) Good braking efficiency in both rear wheels

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

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

Answer: D) Holds the tyre in correct position

27. 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

28. What is the disadvantage of independent suspension system?

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

Answer: A) More maintanance cost

29. What is the purpose of air suspension?

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

Answer: D) Used for leveling purpose

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

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

Answer: A) Coil spring

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

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

Answer: A) Strut type suspension

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

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

Answer: A) Spring weight is less

33. 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

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

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

Answer: D) Ball joint

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

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

Answer: A) 01:02

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

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

Answer: D) Inner edge of tyre wear out faster

37. Why tyre wear found abnormal in the vehicle?

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

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

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

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

Answer: A) 11 : 1 to 24 : 1

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

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

Answer: D) Brake valve

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

A) To provide cusioning effect
B) To take the uneven load
C) To observe braking and driving torque
D) To distribute the load evanly

Answer: C) To observe braking and driving torque

41. What is the disadvantage of excessive positive camber in the wheel aslignment?

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

Answer: D) Tyre outer edge will wearout fast

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

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

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

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

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

Answer: D) Multiple - leaf spring

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

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

Answer: D) Ply rating

45. Which facor affecting suspension?

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

Answer: A) Wornout spring

46. Which rating indicate the braking capablities of the tire to

the consumer?

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

Answer: C) Traction rating

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

A) Thread width
B) Rim width
C) Tyre width
D) Thread radious

Answer: D) Thread radious

48. How the tyre height is calculated?

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

Answer: B) Tyre outer dia - Rim dia

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

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

Answer: D) Improper camber

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

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

Answer: C) Combine high mechanical efficiency with smooth operation

51. Why light weight cars use low steering ratio?

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

Answer: C) To obtain large steering effect

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

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

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

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

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

Answer: D) Carbon fiber reinforced carbon composite

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

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

Answer: C) Fiber composite springs

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

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

Answer: C) Fail safe relay

56. Which is not the function of suspension system?

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

Answer: A) It increase steering stability

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

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

Answer: D) Rotary control valve

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

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

Answer: B) Provide accurate rounds of rim

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

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

Answer: B) 20% less than manual steering

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

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

Answer: C) On the pistons head

61. 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

62. 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

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

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

Answer: C) Telescopic type

64. Which is not the benefit of power steering?

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

Answer: B) Positive breaking system

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

A) Provide cusioning effect on the vehicle
B) Increase the tyre life
C) Provide positive road grip
D) Oberve shocks and vibration

Answer: B) Increase the tyre life

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

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

Answer: A) Provide balanced braking

67. Which principle is applicable for hydraulic brakes?

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

Answer: C) Pascal's law

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

A) Thread radious
B) Tyre outer diameter
C) Tyre width
D) Tyre height

Answer: C) Tyre width

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

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

Answer: C) 120 to 125 PSI

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

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

Answer: C) 7 to 12 mm

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

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

Answer: A) Noise

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

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

Answer: C) Fitting and removing time consuming

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

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

Answer: A) Special type castiron

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

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

Answer: A) Resin

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

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

Answer: A) Improper pre load defective steering

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

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

Answer: A) Eliminate head for spare tyre and jack

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

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

Answer: D) King pin wornout

78. What is the effect of weak suspension?

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

Answer: A) Directional unstability of vehicle

79. What is the advantage of electronic power steering?

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

Answer: B) Energy being consumed only while steering

80. What is the cause of noise in steering?

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

Answer: A) Presence of air in the fluid

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

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

Answer: B) Vibration damping is less effective

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

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

Answer: C) Split wheel

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

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

Answer: D) Wrong flow control valve setting

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

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

Answer: D) Under inflated tyre

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

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

Answer: B) King pin inclination

86. What is the impact of larger scrub radious?

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

Answer: A) Unequal braking on the front wheel

87. 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

88. What is the function of traction control system?

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

Answer: C) Prevent wheel spinning

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

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

Answer: D) ECU

90. 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

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

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

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

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

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

Answer: D) Vehicle pull to one side wheel

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

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

Answer: C) Vehicle pulling to one side