

Student Name: _____ Roll No: _____

1. What is the function of traction control system?

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

2. Which system provided between axles and chassis frame?

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

3. What is the disadvantage of independent suspension system?

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

4. 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 choked

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

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

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

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

7. What is the purpose of 'G' sensor

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

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

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

9. 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

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

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

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

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

12. What is the impact of larger scrub radius?

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

13. 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

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

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

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

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

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

- A) Hard steering B) Wheel wobbling

- C) Steering wheel play D) Vehicle pulling to one side
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- 17.** Which principle is applicable for hydraulic brakes?
- A) Boyle's law B) Hooke's law
C) Pascal's law D) Newton's law of motion
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- 18.** 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
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- 19.** 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
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- 20.** What is the recommended valve of combined angle in the steering system?
- A) 9 - 10 Degree B) 15 - 18 Degree
C) 12 - 15 Degree D) 5 - 8 Degree
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- 21.** Which material is used for brake rotors and brake pads for aircraft and racing cars?
- A) Sintered alloy B) Copper, brass, steel
C) Asbestos D) Carbon fiber reinforced carbon composite
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- 22.** What is the reason of steering wheel play excess?
- A) Wornout sealing rings B) Drop in pressure
C) Low oil level D) Improper pre load defective steering
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- 23.** 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 wearout at centre D) Tyre will crack at centre
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- 24.** Why vibration damper are not used inside the helical spring?
- A) Possibility of stuck in one position B) No effect on load carrying capacity
C) Fitting and removing time consuming D) Not economical
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- 25.** When the driver is warned of difference in tyre pressure?
- A) Difference in pressure exceeds 30% B) Difference in pressure more than 20%
C) Difference in pressure exceeds 40% D) Difference in pressure more than 10%

- 26.** What is the purpose of spokes provided in the wheel?
- A) Support the chassis frame of vehicle B) Distribute pre load evenly
C) Provide directional stability of vehicle D) Provide accurate rounds of rim
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- 27.** What is the purpose of brake proportioning valves in the braking system?
- A) Increase braking efficiency B) Provide balanced braking
C) Prevent front wheel lockup D) Reduces brake pedal effort
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- 28.** 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) Provide hard steering D) Combine high mechanical efficiency with smooth operation
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- 29.** Which type of suspension spring made of fibre glass, laminated and bonded together by tough polyester resins?
- A) Fiber composite springs B) Coil springs
C) Multiple leaf springs D) Monoleaf springs
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- 30.** Why rubber buffer is provided in the main spring of suspension system?
- A) Transfer the load equally B) Protect chassis frame from heavy jerk
C) Provide steering control stability D) Transfer payload smoothly
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- 31.** Which is not the benefit of power steering?
- A) Effort less steering B) Positive braking system
C) Absolute control during driving D) Quick response
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- 32.** 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
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- 33.** How the tyre height is calculated?
- A) Rim dia - tyre outer dia B) Tyre outer dia - Rim dia
C) Thread width + Tyre width D) Tyre width + Bead circle dia
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- 34.** 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

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

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

36. Which advantage does not suit to wheel alignment?

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

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

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

38. 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

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

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

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

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

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

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

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

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

43. 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) Conventional suspension D) Torsion bar suspension

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

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

45. 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

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

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

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

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

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

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

49. What is the effect of weak suspension?

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

50. Which factor affecting suspension?

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

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

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

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

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

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

- A) Improper tyre pressure B) King pin wornout

C) Wrong hose size

D) Drop in pressure

54. 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) Hydraulic shock absorber

C) Automatic load adjustable shock absorber

D) Gas pressurised shock absorber

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

A) Remove the circlip before

B) Remove the return spring before

C) Remove the stopper bolt before

D) Remove the retaining spring before

56. Why light weight cars use low steering ratio?

A) To obtain no steering effect

B) To obtain large steering effect

C) To obtain low steering effect

D) To obtain constant steering effect

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

A) Low pressure

B) High fluid level

C) Noise

D) Steering wheel play

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

A) Between brake tank and vehicle axle

B) Between high control valve and frame

C) Between frame and vehicle axle

D) Between air pressure regulator and front axle

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

A) Shoulder width

B) Ply rating

C) Tyre thickness

D) Bead circle dia

60. 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

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

A) Good braking efficiency in both rear wheels

B) Prevention of ratting

C) Better riding comfort

D) Increased spring life

62. Which type of shock absorber is easy for replacement and

handling?

A) Vane type

B) Mechanical type

C) Telescopic type

D) Piston type

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

A) Leaf spring

B) Suspension spring

C) Air bags in the system

D) Shock absorber

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

A) Over inflated tyre

B) Un equal load distribution

C) Under inflated tyre

D) Defective suspension system

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

A) Cracks developed in the tyre tread

B) Outer edge of tyre wearout faster

C) Centreof tyre wearout faster

D) Inner edge of tyre wear out faster

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

A) Current controller

B) Fail safe relay

C) Solenoid valve

D) Phase compensator

67. How the tyre is specified?

A) Shoulder dia, Bead circle dia, Ply rating

B) Ply rating, tyre inner circle dia, shoulder width

C) Shoulder width, Boad circle dia. Ply rating

D) Shoulder width, Tyre thickness

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

A) Included angle

B) Castor angle

C) King pin inclination

D) Camber angle

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

A) Stabiliser bar

B) Lower control arm

C) Ball joint

D) Torsion bar

70. 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

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

A) Hydraulic type

B) Pneumatic type

C) Electrical type D) Mechanical type

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

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

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

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

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

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

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

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

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

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

77. 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 D) 200 to 215 PSI

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

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

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

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

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

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

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

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

82. What is the use of compact spare tyres?

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

83. What is the purpose of air suspension?

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

84. 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

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

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

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

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

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

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

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

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

89. 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

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

- A) Fibre glass
- C) Mica

- B) Asbestos
- D) Resin

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

- A) EBD
- C) ECU

- B) ELSD
- D) TCS

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

- A) Bolted to the rim centre
- C) Secured in the tyre outer edges

- B) Bolted to metal valve
- D) Secured in the wheel hub

93. 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