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Q. ID: ITISKILL9295WU

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Question Paper

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

Student Name: _____ Roll No: _____

1. What is the effect of weak suspension?

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

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

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

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

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

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

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

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

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

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

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

7. Which facor affecting suspension?

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

8. What is the advantage of electronic power steering?

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

9. 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) 200 to 215 PSI
D) 180 to 210 PSI

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

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

11. 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) Torsion bar suspension
C) Strut type suspension
D) Coil spring suspension

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

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

13. What is the purpose of air suspension?

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

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

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

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

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

16. Which advantage does not suit to wheel alignment?

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

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

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

18. 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

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

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

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

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

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

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

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

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

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

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

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

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

25. 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

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

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

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

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

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

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

29. Which system provided between axles and chassis frame?

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

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

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

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

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

32. 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

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

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

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

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

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

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

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

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

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

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

38. 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

39. 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

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

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

41. Which is not the benefit of power steering?

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

42. 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) Affect steering stability
D) Provide hard steering

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

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

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

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

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

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

46. Which is not the function of suspension system?

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

47. 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

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

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

49. Which rating indicate the braking capablities of the tire to the consumer?

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

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

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

51. How the tyre height is calculated?

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

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

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

53. 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) Replace the with new fluid
D) Adjust the torsion bar linkage

54. What is the cause of ? low pressure? in the hydraulic

power steering system?

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

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

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

56. Why light weight cars use low steering ratio?

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

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

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

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

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

59. 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 cusioning effect
C) To take the uneven load
D) To distribute the load evanly

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

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

61. 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

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

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

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

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

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

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

65. What is the advantage of coil spring?

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

66. What is the use of compact spare tyres?

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

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

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

68. 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) Coil springs
D) Fiber composite springs

69. 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

70. Why tyre wear found abnormal in the vehicle?

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

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

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

72. What is the cause of noise in steering?

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

73. What is the impact of larger scrub radious?

A) Unequal braking on the front wheel

B) Wear on the centre part of tyre

C) Wear on the outer edge of tyre

D) Bending of steering linkage point

74. 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%

75. 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, Tyre thickness

D) Shoulder width, Boad circle dia. Ply rating

76. 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) Gas pressurised shock absorber

C) Hydraulic shock absorber

D) Automatic load adjustable shock absorber