Automotive Technology Final Exam

Multiple Choice

Identify the choice that best completes the statement or answers the question.

1. Technician A says that service brakes are part of the emergency braking system of a vehicle. Technician B says that service brakes are the primary braking system on a vehicle. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

2. Technician A says that the two types of service brakes used on vehicles are integral brakes and auxiliary brakes. Technician B says that the two types of service brakes used on vehicles are drum brakes and disc brakes. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

3. Technician A says that brake lines are used to transfer hydraulic pressure from the service brake’s master cylinder to the wheel brakes. Technician B says that brake fluid is used to transfer hydraulic pressure from the service brake’s master cylinder to the wheel brakes. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

4. Technician A says that the primary reason for brake pedal fade is vapor in the hydraulic braking system. Technician B says that the primary reason is worn brake pads or shoes. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

5. Technician A says that you should avoid spilling DOT 3 and DOT 4 brake fluids on a vehicle’s finish because it can interfere with the aerodynamics of the vehicle. Technician B says that you should avoid spilling DOT 3 and DOT 4 brake fluids on a vehicle’s finish because they are strong paint solvents and can damage a vehicle’s finish. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

6. Technician A says that the major disadvantage of polyglycol-based brake fluid is its tendency to vaporize easily. Technician B says that the major disadvantage of polyglycol-based brake fluid is its tendency to compress easily. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.
7. Technician A says that the advantage of a dual-braking system is that it has two sets of calipers for each wheel. Technician B says that the advantage of the dual braking system is that if one circuit fails the other should continue to work, allowing the driver to stop the vehicle safely. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

8. Technician A says that pushing a vehicle’s service brake pedal forces pressurized fluid through the braking system lines and hoses to activate the brakes. Technician B says that the transmission must first be in the proper gear for the brakes to function. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

9. Technician A says that it is safe to use brake fluid that has been opened, capped, and stored for six months. Technician B says that brake fluid should routinely be opened, capped, and stored before use. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

10. Technician A says that the master cylinder forces pressurized fluid through the brake lines to the wheel brakes. Technician B says the master cylinder forces pressurized fluid into the reservoir. Who is correct?
    a. Technician A.
    b. Technician B.
    c. Both Technician A and Technician B.
    d. Neither Technician A nor Technician B.

11. Technician A says that on a front-rear split system, one circuit controls the front brakes while the other controls the rear brakes. Technician B says that this type of system is a diagonally split system. Who is correct?
    a. Technician A.
    b. Technician B.
    c. Both Technician A and Technician B.
    d. Neither Technician A nor Technician B.

12. Technician A says that the metering valve is used to delay the flow of brake fluid to the rear drum brakes. Technician B says that the delay allows the front disc and rear drum brakes to be applied at the same time. Who is correct?
    a. Technician A.
    b. Technician B.
    c. Both Technician A and Technician B.
    d. Neither Technician A nor Technician B.

13. Technician A says that proportioning valves reduce pressure to the rear wheel brakes. Technician B says that a proportioning valve keeps the same amount of fluid in each reservoir in a dual-braking system. Who is correct?
    a. Technician A.
    b. Technician B.
    c. Both Technician A and Technician B.
    d. Neither Technician A nor Technician B.
14. Technician A says that a residual pressure check valve keeps residual pressure in the braking system, which keeps the wheel cylinder seals expanded so that air cannot leak past them. Technician B says that a residual pressure check valve in a disc brake system could cause brake drag. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

15. Technician A says that a master cylinder functions to convert pedal pressure to hydraulic pressure. Technician B says that a master cylinder functions as a container for brake fluid. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

16. Technician A says drum brakes are frequently used as parking brakes because they can be engaged mechanically as well as hydraulically. Technician B says drum brakes are used as parking brakes because they are self-energizing. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

17. Technician A says the backing plate is the mounting for most drum brake components. Technician B says the backing plate is a secondary friction point for the drum brakes. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

18. Technician A says brake linings can be riveted to brake shoes. Technician B says brake linings can be cemented to brake shoes. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

19. Technician A says some self-adjusters are one-shot. Technician B says some self-adjusters are incremental. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

20. Technician A says fixed calipers have pistons on both sides of the rotor. Technician B says floating calipers have pistons on both sides of the rotor. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.
21. Technician A says floating calipers move on guide pins. Technician B says sliding calipers move on machined surfaces. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

22. Technician A says disc brake calipers adjust for lining wear by using special springs behind the piston. Technician B says disc brake calipers adjust for lining wear with special piston seals that deflect with piston movement and readjust their position along the piston. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

23. Technician A says a seized caliper may cause a car to pull to one side. Technician B says a bent pad may cause a car to pull to one side. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

24. Technician A says a defective power brake booster or a brake pedal binding may cause brakes to fail to release. Technician B says a leak in the master cylinder may cause brakes to fail to release. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

25. Technician A says you should support the caliper with a wire after removing it from the vehicle. Technician B says letting the caliper hang from its hose can damage the hose. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

26. Technician A says the minimum rotor thickness is stamped into the front of the rotor. Technician B says the minimum rotor thickness is always the inverse square of the radius of the rotor. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

27. Technician A says a rotor must be replaced if there is not enough thickness for machining. Technician B says special shims can be attached to the rotor to increase its thickness. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.
28. Technician A says a nondirectional finish on a brake rotor helps the rotor dissipate heat faster. Technician B says a nondirectional finish keeps the pads from riding up and down on the grooves left from the machining operation. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

29. Technician A says the power steering pump provides hydraulic pressure in a Powermaster booster. Technician B says a separate hydraulic pump provides the hydraulic pressure in a Powermaster booster. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

30. Technician A says that a soft brake pedal is an indication of a vacuum booster problem. Technician B says that a hard brake pedal is an indication of a vacuum booster problem. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

31. Technician A says a tire’s tread is never asymmetrical. Technician B says a tire may have a symmetrical or asymmetrical tread. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

32. Technician A says cupping indicates that the tires have not been rotated very often. Technician B says cupping indicates that the wheels may be improperly balanced, the shock absorbers may be worn, or the ball joints may be worn. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

33. Technician A says that to measure the bolt circle on a five-bolt wheel, you would measure from the center of one hole to the outside edge of the hole farthest away. Technician B says you would measure from the center of both holes. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

34. Technician A says wheel fasteners must be tightened in a specific pattern to avoid missing one of the fasteners. Technician B says wheel fasteners must be tightened in a specific pattern to spread the torque load as evenly as possible across the face of the wheel. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.
35. Technician A says tires and wheels should be checked for balance to improve their appearance. Technician B says tires and wheels should be checked for balance to avoid vibration or shimmy during operation. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

36. Technician A says dynamic or spin balancing is the most accurate method. Technician B says static balancing is the most accurate method. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

37. Technician A says tires may be bias-belted, bias-ply, or radial-ply. Technician B says there are only two types of tire construction. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

38. Technician A says the brand name and model name of a tire often appear on its sidewall. Technician B says the tire’s size and speed symbol are often included on the sidewall. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

39. Technician A says rim diameter is one of the dimensions used to describe a wheel. Technician B says rim diameter is the measurement from the inside bead seat wall to the opposite bead seat wall. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

40. Technician A says a static balancer uses a bubble level to determine balance. Technician B says a dynamic balancer uses a bubble level to determine balance. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

41. Technician A says a tire marked 235/60R15 has an overall height of 235 mm, is 60 mm wide, and is used for racing. Technician B says the tire has a 235-mm section width, has an aspect ratio of 60, and is of radial construction. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.
42. Technician A says the lower the treadwear rating number of a tire, the longer the tread will last. Technician B says the higher the treadwear rating number, the longer the tread will last. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

43. Technician A says that in a recirculating-ball steering system, steel balls recirculate continuously within guide paths. Technician B says the steel balls float loosely within the steering mechanism. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

44. Technician A says the advantage of a rack-and-pinion steering system is that it has fewer parts. Technician B says the advantage of a rack-and-pinion steering system is that it is space and weight saving. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

45. Technician A says in a rack-and-pinion steering system the tie rods are moved left and right by hydraulic pressure. Technician B says the tie rods are moved left and right by the lateral movement of the toothed rack inside the rack-and-pinion housing. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

46. Technician A says the A/C compressor produces the hydraulic pressure needed to run the power steering. Technician B says the power steering pump produces the hydraulic pressure needed to run the power steering. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

47. Technician A says that when bleeding a power steering system, the steering wheel must be turned from full left to full right several times to boost fluid temperature. Technician B says boosting the fluid temperature is unnecessary. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

48. Technician A says shock absorber mounts are not designed to carry the total vehicle weight. Technician B says shock absorber mounts are designed to carry the total vehicle weight. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.
49. Technician A says the anti-sway bar prevents the driver from rocking the steering wheel back and forth rapidly. Technician B says the anti-sway bar controls body roll and sway. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.

50. Technician A says a MacPherson strut comprises a shock absorber and a torsion bar. Technician B says a MacPherson strut comprises a shock absorber and a coil spring in a single unit. Who is correct?
   a. Technician A.
   b. Technician B.
   c. Both Technician A and Technician B.
   d. Neither Technician A nor Technician B.