Air Brakes Practice Test

Directions: Read each question carefully and select the answer that best answers the question.

NOTE: This test must be taken by all CDL applicants desiring to operate equipment with air brakes.

1. Which of the following is okay to find in the air brake system?

   A. Oil  
   B. Air  
   C. Water  
   D. All of the above

2. Air loss in a single vehicle (not a combination unit) should not be more than __________ with the engine off and the brakes on.

   A. 1 psi in 30 seconds  
   B. 1 psi in one minute  
   C. 2 psi in 45 seconds  
   D. 3 psi in one minute

3. The vehicle must have a warning device which comes on when the air pressure in the service air tanks falls below:

   A. 40 psi  
   B. 50 psi  
   C. 60 psi  
   D. 80 psi

4. If the air system should develop a leak, what will keep air in the air tanks?

   A. The governor  
   B. The tractor protection valve  
   C. The emergency relay valve  
   D. The one-way check valve
5. Which brake system applies and releases the brakes when the driver uses the brake pedal?
   A. The emergency brake system  
   B. The service brake system  
   C. The parking brake system  
   D. None of the above

6. When using the parking brakes or emergency brakes, what type of pressure is being used?
   A. Fluid pressure  
   B. Spring pressure  
   C. Air pressure  
   D. Any of the above

7. The air loss rate for a straight truck or bus with the engine off and the brakes applied should not be more than:
   A. 1 psi in 60 seconds  
   B. 1 psi in one minute  
   C. 2 psi in 45 seconds  
   D. 3 psi in one minute

8. Air brake equipped vehicles must have:
   A. At least three air tanks  
   B. A hydraulic braking system, in case the air system fails  
   C. An air pressure gauge, to show the pressure available for braking  
   D. An air application gauge, to show air used by the brake chambers for braking

9. Which of the following statements about brakes is true?
   A. The heavier a vehicle or the faster it is moving, the more heat the brakes have to absorb to stop it  
   B. Brakes have more stopping power when they get very hot  
   C. Brake drums cool very quickly  
   D. All of the above

10. Three different systems are found on modern air brake systems; service brakes, parking brakes, and:
    A. Emergency brakes  
    B. Foot brakes  
    C. S-cam brakes  
    D. Drum brakes
11. The purpose of engine retarders is to:
   A. Provide emergency brakes
   B. Help slow the vehicle while driving and reduce brake wear
   C. Apply extra braking power to the non-drive axles
   D. Help prevent skids and slides

12. To use the stab braking technique during emergency braking, you:
   A. Pump the brake pedal rapidly and lightly
   B. Brake hard with the pedal until the wheels lock, then get off the brakes until the wheels begin to roll again
   C. Brake hard with the pedal until the wheels lock, then get off the brakes for as long as the wheels were locked
   D. Brake hard with the pedal and hand valve until you stop

13. If your vehicle has an alcohol evaporator, it’s there to:
   A. Get rid of alcohol that condenses in the air tanks
   B. Let the driver skip the daily tank draining
   C. Increase tank pressure the way superchargers boost engines
   D. Reduce the risk of ice in the air brake valves in cold weather

14. If your vehicle is equipped with an alcohol evaporator, every day during the winter you should:
   A. Check the alcohol level and fill if necessary
   B. Change the alcohol with a new bottle
   C. Oil the system with 5 wt. oil
   D. Drain any alcohol that has accumulated

15. The air supply pressure gauge shows the driver how much pressure:
   A. Has been used in this trip
   B. Is available in the air tanks
   C. Is being sent to the brake chambers
   D. None of the above

16. The most common type of foundation brake found on heavy commercial motor vehicles is:
   A. Disc
   B. Wedge and drum
   C. S-cam drum
   D. None of the above
17. A straight truck or bus air brake system cannot leak more than how many psi per minute with the engine off and the brakes released?

A. 1 psi  
B. 2 psi  
C. 3 psi  
D. 4 psi

18. How do you check the free-play in manual slack adjusters?

A. Stop on level ground and apply the emergency brakes  
B. Park on level ground, chock wheels, release the parking brakes and pull slack adjusters  
C. Park on level ground and drain off air pressure before making adjustments  
D. Apply the service brakes by hand at the brake chambers and watch the slack adjusters move

19. Which of the following answers is most correct about brake use on a long and steep downgrade?

A. Use the braking effects of the engine, and when the vehicle speed reaches the “safe” speed, apply brakes firmly until vehicle speed is reduced to approximately 5 mph below “safe” speed  
B. Use stab braking  
C. Use only the trailer brakes to maintain “safe” speed  
D. Apply brakes when the vehicle speed reaches 5 mph over “safe” speed and then release when speed of vehicle is back at the “safe” speed

20. When a failure occurs in the service brake system, the system you need to use to stop the vehicle is the:

A. Parking brake system  
B. Emergency brake system  
C. Drum brake system  
D. Hand brake system

21. If your truck or bus has dual parking control valves, you can use pressure from a separate tank to:

A. Release the emergency brakes to move a short distance  
B. Apply more brake pressure for stopping if the main tank is getting low  
C. Stay parked without using up service air pressure  
D. Balance the service brake system while you drive
22. The air compressor governor controls:

A. The RPMs of the air compressor  
B. Whether the compressor is in good condition  
C. Air pressure applied to the brakes  
D. When the compressor will pump air into the storage tanks

23. When you have to make a quick emergency stop, you should brake in a way that allows you to:

A. Steer hard while braking hard  
B. Use the full power of the brakes and lock them  
C. Continue in a straight line and maintain steering control  
D. Burn up the hand brake first

24. What turns on the electrical stop light switch in an air brake system?

A. Spring pressure  
B. Hydraulic pressure  
C. Air pressure  
D. The driver

25. In air brake equipped vehicles, you use the parking brakes when?

A. Slowing down  
B. As little as possible  
C. Whenever you park the vehicle  
D. Only during pre-trip and post-trip inspections

26. What will determine how effectively the spring emergency brakes or the parking brakes work?

A. The condition of the service brakes  
B. This can only be tested by trained brake service professionals  
C. The adjustment of the service brakes  
D. Braking power will increase when the service brakes are hot

27. A combination vehicle air brake system cannot leak more than how many psi per minute with the engine off and the brakes released?

A. 1 psi  
B. 2 psi  
C. 3 psi  
D. 4 psi
28. The brake pedal:
   A. Is the main control in the system
   B. Can be a foot rest during normal driving
   C. Controls the air pressure applied to operate the brakes
   D. Exerts force on the slack adjusters by rods and connectors

29. During normal operations, the parking and emergency brakes are usually held back by:
   A. Air pressure
   B. Spring pressure
   C. Centrifugal force
   D. Bolts or clamps

30. Why should you not fan the brakes on and off during long downgrades?
   A. Air usage is less when fanning
   B. Brake linings do not get hot when fanning
   C. The short time off the brakes does not allow for brake cooling
   D. None of the above
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