

## AIR BRAKES PRACTICE TEST

1. Modern air brake systems combine three different systems. The systems are the service, parking, and \_\_\_\_\_ brake systems.
  - A. Emergency
  - B. Foot
  - C. Drum
2. The driver must be able to see a warning before air pressure in the service air tanks falls below \_\_\_\_\_ psi.
  - A. 40
  - B. 60
  - C. 80
3. The brake pedal in an air brake system:
  - A. Controls the speed of the air compressor
  - B. Always needs to be held down halfway during normal driving
  - C. Controls the air pressure applied to the brakes
4. Air braking takes more time than hydraulic braking because air:
  - A. Brakes use different brake drums
  - B. Takes more time to flow through the lines than hydraulic fluid
  - C. Is always leaking through air line fittings.
5. If your vehicle has an alcohol evaporator, it is there to:
  - A. Rid the wet tank of alcohol that condenses and sits at the bottom
  - B. Eliminate the need for daily tank draining
  - C. Reduce the risk of ice in air brake valves in cold weather
6. If your truck has dual parking control valves, you can use pressure from a separate tank to:
  - A. Release the spring emergency parking brakes to move a short distance
  - B. Apply more brake pressure if the main tank is getting low
  - C. Stay parked twice as long with your service air pressure
7. To check the free play of manual slack adjusters on S-cam brakes, you should park on:
  - A. Level ground with the parking brake on, then apply the service brake
  - B. Level ground, chock the wheels, and turn off the parking brakes
  - C. Level ground and drain off air pressure before adjusting
8. Of the choices below, the first thing to do when a low air pressure warning comes on is:
  - A. Stop and safely park as soon as possible
  - B. Shift to the next higher gear
  - C. Open the air supply control valve
9. The air compressor governor controls:
  - A. When the brake chambers release pressure
  - B. Air pressure applied to the brakes
  - C. When air is pumped into the air tanks
10. The braking power of the spring brakes:
  - A. Is not affected by the condition of the service brakes
  - B. Can only be tested by highly-trained brake service people
  - C. Depends on whether the service brakes are in adjustment
11. All vehicles equipped with air brakes have:
  - A. A hydraulic system, in case the air system fails
  - B. A supply pressure gauge
  - C. An air use gauge

12. If you must make an emergency stop, brake so you:
  - A. Use the full power of the brakes and lock them
  - B. Can steer and your vehicles stays in a straight line
  - C. Use the hand brake first
  
13. If you do not have automatic tank drains, how often should you drain the oil and water from the bottom of compressed air storage tanks?
  - A. At the end of each day of driving
  - B. Once a week
  - C. Every other week
  
14. The application pressure gauge shows how much air pressure you:
  - A. Have used in this trip
  - B. Have in the air tanks
  - C. Are applying to the brakes
  
15. Your brakes are fading when:
  - A. You have to push harder on the brake pedal to control your speed on a downgrade
  - B. The brake pedal feels spongy when you apply pressure
  - C. You release pressure on the brake pedal and speed increases
  
16. If your vehicle has as alcohol evaporator, every day during cold weather you should:
  - A. Check the alcohol level and fill the evaporator if needed
  - B. Change the alcohol
  - C. Clean the air filter with alcohol
  
17. Why should you drain water from compressed air tanks?
  - A. The low boiling point of water reduces braking power
  - B. Water can freeze in cold weather and cause brake failure
  - C. To keep the air compressor oil clean
  
18. Your vehicle has a dual air brake system. If a low air pressure warning comes on for the secondary system, you should:
  - A. Bring the vehicle to a safe stop and continue only when the system is fixed
  - B. Reduce your speed, and test the remaining system while driving
  - C. Reduce your speed, and drive to the nearest garage for repairs
  
19. During normal driving, spring brakes usually held back by:
  - A. Bolts or clamps
  - B. Air pressure
  - C. Spring pressure
  
20. In air brake vehicles, the parking brakes should be used:
  - A. As little as possible
  - B. Any time the vehicle is parked
  - C. To hold your speed when going downhill
  
21. Emergency stab braking is when you:
  - A. Press hard on the brake pedal and apply hand valve fully until you stop
  - B. Apply the hand valve for one second, then push hard on the pedal
  - C. Brake as hard as you can, release the brake when the wheels lock, then put on the brakes again when the wheels start rolling
  
22. A straight truck air brake system should not leak at a rate of more than \_\_\_\_ psi per minute with the engine off and the brakes released.
  - A. 6
  - B. 4
  - C. 2

23. The air loss rate for a straight truck with the engine off and the brakes on should not be more than:
- A. 1 psi in 30 seconds
  - B. 2 psi in 45 seconds
  - C. 3 psi in one minute
24. The supply pressure gauge shows how much pressure:
- A. You have used in this trip
  - B. Is in the air tanks
  - C. Is going to the brake chambers
25. The brake system that applies and releases the brakes when the driver uses the brake pedal is the \_\_\_\_ brake system.
- A. Service
  - B. Parking
  - C. Drum
26. Why should you drain water from compressed air tanks?
- A. The boiling point reduces braking power
  - B. Water can freeze in cold weather and cause brake failure
  - C. Water cools the compressor too much
27. Total stopping distance for air brakes is longer than that for hydraulic brakes due to \_\_\_\_ distance.
- A. Perception
  - B. Reaction
  - C. Brake lag
28. The most common type of foundation brake found on heavy vehicles is the:
- A. Disc brake
  - B. Wedge drum brake
  - C. S-cam drum brake
29. Which of the following makes total stopping distance longer for air brakes than for hydraulic brakes:
- A. Brake lag
  - B. Perception distance
  - C. Reaction time distance
30. If the air compressor develops a leak, what keep the air tanks?
- A. The one-way check valve
  - B. The emergency relay valve
  - C. The tractor protection valve
31. Why must air-tanks be drained?
- A. To drain all the air out of the tank
  - B. To drain moisture and oil out of the tank
  - C. To keep anyone from moving the vehicle
32. What is a supply pressure gauge used for?
- A. To tell how much diesel is in the vehicle
  - B. To tell you how much water is in the air tank
  - C. To tell you how much air is in the air tank
33. All vehicles with air brakes must have a low pressure warning signal.
- A. True
  - B. False
34. What are spring brakes?
- A. Brakes used for parking
  - B. If the airbrakes leak down, springs press the brakes on to stop the vehicle
  - C. The spring on the brake pedal

35. Front wheel brakes are good under all conditions.  
A. True  
B. False
36. When you put your brakes on the air brake system works with an electric switch, by air pressure to turn on the brake lights.  
A. True  
B. False
37. What do air brakes use to make the brakes work?  
A. Compressed gas  
B. Compressed oil  
C. Compressed air
38. Air brakes are really three different braking systems: service brake, parking brake and emergency brake.  
A. True  
B. False
39. The service brake applies and releases:  
A. The parking brake when you use the parking brake control  
B. The brake when you use the brake pedal during normal driving  
C. In the event of an emergency
40. The parking brake applies and releases:  
A. The brake pedal during normal driving  
B. In the event of an emergency  
C. The parking brakes when you use the parking brake control
41. The emergency brake system:  
A. Uses parts of the service and parking brake system to stop the vehicle in the event of a brake system failure.  
B. Uses the service brake to stop the vehicle in the event of a brake system failure  
C. Uses the parking brake to stop the vehicle in the event of a brake system failure
42. The governor controls when the air compressor will pump into the air storage tanks.  
A. True  
B. False
43. The air storage tanks are used to hold compressed air.  
A. True  
B. False
44. When you put on the brakes by pushing down the brake pedal:  
A. The air pressure is reduced to the brake pads  
B. Air pressure is applied to the brake pads  
C. Compressed air is let go out of the system
45. The S-cam forces the brake shoes away from one another and presses them against the inside of the brake drum. It is called the S-cam because:  
A. It is shaped like the letter Z  
B. It is shaped like the letter N  
C. It is shaped like the letter S
46. What is a dual air brake system?  
A. A two brake system, one operates the front brakes and one operates the back brakes  
B. A two braking system, one for each side of the vehicle  
C. A two braking system, one for daytime and one for nighttime driving

47. What are the slack adjusters?
- A. It is the space between the back wheels
  - B. It is an adjusting nut on the backside of the brake drum used for adjusting the brakes
  - C. It is an adjusting nut under the cab to adjust the springs.
48. How can you check the slack adjusters?
- A. Park on level ground, turn off parking brakes, pull hard on each slack adjuster. It shouldn't move more than one inch
  - B. Park on level ground, turn off parking brakes and press brake pedal
  - C. Park on an incline and see if the vehicle rolls
49. How can you test the low pressure warning signal?
- A. While the engine is running, step on and off the brake pedal
  - B. Shut off the engine and see if the air pressure leaks down
  - C. Shut off the engine with enough air pressure, turn on the electrical power and step on and off the brake pedal until the low air pressure warning signal comes on
50. What can you check to see if the spring brakes come on automatically?
- A. Step on and off the brake, with the engine off, the parking brake knob should pop out when air pressure falls between 20-40 psi
  - B. Get under the vehicle and pull on the spring brakes
  - C. Turn on the engine and pump the brake pedal down to the floor
51. What are the maximum leakage rates?
- A. Less than four psi in one minute for single vehicles and less than eight psi in one minute for combination vehicles
  - B. Less than two psi in one minute for single vehicles and less than three psi in one minute for combination vehicles
  - C. Less than six psi for all vehicles
52. Should you ever leave your vehicle unattended without applying parking brakes or chocking the wheels?
- A. Yes
  - B. No
53. If you are away from your vehicle only a short time, you don't need to use the parking brake.
- A. True
  - B. False
54. How often should you drain air tanks?
- A. Daily
  - B. Weekly
  - C. Monthly
55. The use of brakes on a long steep downgrade is only a supplement to the braking effect of the engine.
- A. True
  - B. False
56. What factors can cause brakes to fade or fail?
- A. Not pressing the brake pedal hard enough
  - B. Over heating, low air pressure, and not relying on the engine braking effect
  - C. Not taking your foot off the accelerator pedal
57. Why should you be in the proper gear before starting down a hill?
- A. So you only have to apply the brake just hard enough to feel a definite slowdown
  - B. So you don't have to shift gears going downhill
  - C. So you can go through the gears on the way down

58. If oil and water collect in the air tanks what can happen to the brakes?
- A. The brakes could heat up
  - B. The brakes could fail
  - C. The brakes could lock up
59. What is the purpose of an alcohol evaporator?
- A. So you don't have to drain the air tanks as often
  - B. To have a drink available if you get thirsty
  - C. To reduce the risk of ice in the brake valves and other parts in cold weather
60. What is another name for controlled braking?
- A. Steady braking
  - B. Squeeze braking
  - C. Hard braking