

THE TOP 171 MOST COMMON

GENERAL KNOWLEDGE QUESTIONS

Lose the fear of the unknown. Study the most common CDL general knowledge questions so you'll know what to expect on the big test day.

Know what
to expect





Please do not try to take these documents into the knowledge exam room to cheat with

The term “**cheat sheet**” used to mean a sheet of notes that you kept with you to cheat on an exam. Today, it has also come to mean a quick reference or ready reference of the most important or frequently used items. That’s how we intend our “cheat sheets” to be used: As quick references for you to browse to help you study for your written knowledge test.

1. With a BAC of _____, most people lose consciousness, and some die.

✓ 0.4

Most people with a BAC of 0.40% will pass out; some will die.

2. To prevent a load from shifting, there should be at least one tie-down for every _____ feet of cargo.

✓ 10

The rule is one tie-down for every ten feet of cargo but at least two tie-downs regardless of how small the cargo is.

3. Name two situations in which the legal maximum weights may not be safe to haul.

✓ During bad weather; in mountains.

A heavily loaded vehicle will have a longer stopping distance, and its speed will be harder to control on downgrades. Therefore, when you must travel in bad weather or in the mountains, consider keeping the load significantly below the maximum legal weight limit.

4. If you are stopped at a rest area and found to have a blood alcohol concentration (BAC) of .02, you will be placed out of service for

✓ 24 hours.

If you are found to have any detectable BAC (even if it's under the legal limit), you will be placed out-of-service for 24 hours.

5. What does "axle weight" mean?

✓ The weight transmitted to the ground by one axle or one set of axles.

Axle weight is the weight transmitted from one axle or a set of axles to the ground.

6. The distance that you should look ahead of your vehicle while driving is about _____ at highway speed.

✓ 1/4 mile

While driving, you should scan the road 12–15 seconds ahead. At 60 mph, your vehicle will travel a quarter of a mile in 15 seconds.

7. Which is true about tires and hot-weather driving?

✓ When driving in very hot weather, you should inspect your tires every two hours or every 100 miles.

Air pressure increases with temperature. In very hot temperatures, a tire may blow out or even catch fire. Check your tires every two hours or 100 miles. If any tires are too hot to touch, remain stopped until they cool off.

8. Medical certificates must be renewed every

✓ 2 years.

An FMCSA-approved medical examiner's physical examination is valid for up to 24 months. However, the medical examiner may issue you a medical certificate that expires sooner if you have a medical condition that should be monitored more frequently, such as high blood pressure.

9. What is the minimum tread depth for tires other than front tires?

✓ 2/32 inch.

Steering axle tires must have a tread depth of at least 4/32 inch. All other tires must have a tread depth of at least 2/32 inch.

10. You are driving a vehicle that can be driven safely at 55 mph on an open road. Although the speed limit is 55 mph, traffic is heavy, moving at 35 mph. The safest speed for your vehicle in this situation is

- ✓ 35 mph.

It's usually safest to drive at the speed of traffic rather than constantly pass other vehicles or invite other drivers to pass you. However, if there are lower speed limits posted for CMVs, obey them.

11. You are driving a 40-foot vehicle at 35 mph. The road is dry and visibility is good. What is the least amount of space you should keep in front of your vehicle to be safe?

- ✓ 4 seconds.

The formula for following distance is one second per ten feet of vehicle, plus an extra second if you are traveling over 40 mph. Therefore, for a 40-foot vehicle traveling at 35 mph, you should leave a following distance of four seconds.

12. If you're not sure what to use to put out a hazardous materials fire, what should you do?

- ✓ Wait for qualified firefighters.

If you don't know how to put out the fire, you could end up making things even worse. In this case, you're better off calling professional firefighters to deal with the situation.

13. If you are driving a long distance, you should

- ✓ stop often and take short breaks before you feel really drowsy or tired.

To maintain your alertness during a long drive, especially at night, plan to take frequent rest breaks – about every two hours or 100 miles.

14. How far ahead should you be looking while driving in town?

- ✓ 1 block.

While driving, you should scan the road 12–15 seconds ahead. At speeds that are typical of urban areas, your vehicle will travel about one block in 12–15 seconds. At 60 mph, your vehicle will travel a quarter of a mile in 15 seconds.

15. When driving a commercial vehicle with a height over 13 feet, you should

- ✓ stop and make sure if you aren't certain that a clearance is high enough.

Don't try to drive your CMV under a bridge or overpass unless you're sure you have enough vertical clearance. Some CMVs are more than 13 feet tall. Many Western states allow CMVs to be even taller. Always know the height of the vehicle you're driving, but be aware that once unloaded, the height of your vehicle may increase.

16. In your mirror, you see a car approaching from the rear. The next time you check your mirror, you don't see the car. To change lanes, you should

- ✓ wait until you are sure the car isn't in your blind spot.

Before you change lanes, you must first make sure that no vehicles are hiding in your blind spots.

17. The distance your vehicle travels from the time your eyes see a hazard to the time your brain recognizes it is called

- ✓ perception distance.

The distance that your vehicle travels from when your eyes see a hazard to when your brain finally recognizes it as a hazard is called the perception distance.

18. If you must stop your vehicle beyond a curve that hides your vehicle from other drivers within 500 feet, place your warning devices

- ✓ 10 feet behind and up to 500 feet behind your vehicle.

This is required by federal regulation 49 CFR 392.22. This regulation also specifies where to place warning devices on other types of roadways such as undivided two-way roads and hills.

19. Optional safety equipment may include emergency phone numbers, tire chains, and

- ✓ tire changing equipment.

Your vehicle must be equipped with a properly charged fire extinguisher and warning devices (flares, fusees, or reflective triangles). Optional emergency equipment can include tire chains in certain climates, tire changing equipment, emergency phone numbers, and an accident reporting packet.

20. To prevent brake fade, you should

- ✓ select a gear that will keep your vehicle at a safe speed on steep downgrades.

If you keep applying the brakes to control your speed on steep downgrades, the brakes may fade (lose their effectiveness). Instead, shift into a low gear. This will generate a braking effect to slow the vehicle, known as engine braking. The lower the gear, the greater the engine braking effect. Apply the brakes only when engine braking is insufficient or you want to stop.

21. Name some important steering system parts.

- ✓ Tie rod, spindle, and pitman arm.

The pitman arm, spindle, tie rod, and steering gear box are all parts of the steering system.

22. Wheel bearing seals should be checked for

- ✓ leaks.

During Step 5 (Walk-Around Inspection) of the Seven-Step Inspection Method, check the wheel bearing seals for any signs of cracks or leaks.

23. One can recognize hazardous materials by looking at the container's

- ✓ label.

Federal regulations require shippers to warn drivers and others about the nature of the hazardous materials they are shipping. The shipper affixes US DOT-compliant HazMat labels to the packages and supplies the driver with the appropriate placards to attach to his or her vehicle. The shipper also notes the hazardous nature of the materials on the shipping papers. [49 CFR 172.400], [49 CFR 172.407]

24. High beams should be

- ✓ used when it is safe and legal to do so.

High beams will help you see farther ahead at night, making you a safer driver. However, to prevent blinding other drivers, dim your headlights whenever you are within 500 feet of an oncoming vehicle or within 500 feet of a vehicle you are following.

25. What does "communicating" mean in safe driving?

- ✓ Letting other drivers know you're there.

Other drivers may not always notice you even if you're driving a big vehicle in plain sight. Before passing another vehicle, communicate your presence by tapping your horn lightly or flashing your headlights. In bad weather in the daytime, turn on your headlights to make your vehicle more visible to other road users.

26. What is true about engine overheating?

- ✓ You should never remove the radiator cap on a pressurized system until the system has cooled.

Never remove the radiator cap if the engine is overheated. Steam and boiling water could shoot out under high pressure and injure you. Wait until you can touch the radiator cap with your bare hand without it feeling excessively hot. Some vehicles have coolant overflow tanks or sight glasses that let you check the coolant level without removing the radiator cap.

27. How do you test the hydraulic brakes for leaks?

- ✓ Pump the brake pedal three times; then apply firm pressure to the pedal and hold it for five seconds. The pedal should not move.

To test a vehicle equipped with hydraulic brakes for leaks in the brakes, first pump the brake pedal three times. Next, apply firm pressure to the brake pedal for five seconds. If it moves, the brakes may have a leak or some other problem.

28. Name two causes of fires.

- ✓ Underinflated tires and duals that touch.

Tires that overheat can catch fire. Underinflation causes increased flexing of the tire, which increases tire temperature. Dual tires that touch each other or other parts of the vehicle can overheat due to friction.

29. If your vehicle catches fire while you are driving, you should

- ✓ park in an open area.

If your vehicle catches fire, pull off the road and park in an open area away from anything that might catch fire, such as buildings or trees. Especially avoid parking your burning vehicle near a gas station!

30. What is the proper way to hold the steering wheel?

- ✓ Firmly, with both hands on opposite sides of the wheel

Hold the steering wheel firmly with both hands. Your hands should be on opposite sides of the steering wheel. If you hold the steering wheel with just one hand, it could pull out of your grasp if you hit a pothole or the curb.

31. The tendency for long commercial vehicles to swing wide on turns is called

- ✓ off-tracking.

When any vehicle turns, its rear wheels will follow a shorter path than its front wheels. This is called off-tracking or "cheating." The longer the vehicle, the greater the difference. In a combination vehicle, the trailer's wheels will off-track more than the tractor's rear wheels. In a double or triple combination vehicle, the wheels of the last trailer will off-track the most.

32. Escape ramps are

- ✓ used to stop runaway vehicles.

Escape ramps are located on many steep mountain grades. Escape ramps are built to stop runaway vehicles safely without injuring drivers or passengers. Escape ramps use a long bed of loose, soft material such as gravel to slow a runaway vehicle, sometimes in combination with an upgrade.

33. The purpose of retarders is to

- ✓ help slow the vehicle while driving and reduce brake wear.

Retarders can be used to help slow a vehicle, reducing the need for braking and thus reducing brake wear. However, retarders should not be used on slippery roads because the retarders can cause the drive wheels to skid.

34. How does the height of the vehicle's center of gravity affect safe handling?

- ✓ Trucks with a high center of gravity can roll over at the posted speed limit for a curve.

Trucks with a high center of gravity are much more likely to roll over on a curve, even if they are not exceeding the posted or recommended speed limit. When driving such a vehicle on a curve, slow down well below the posted speed limit.

35. You do not have a Hazardous Materials Endorsement on your commercial driver's license. You are asked to deliver hazardous materials in a placarded vehicle. You should

- ✓ refuse to haul the load.

You must have a hazardous materials endorsement on your CDL to drive a vehicle that is placarded for hazardous materials. However, not all packages of hazardous materials require placarding your vehicle. Federal regulations exempt certain amounts and types of hazardous materials from placarding, but states may impose more stringent requirements. Check with your state's transportation department. [49 CFR 172.500]

36. While driving, you see a small (1-foot-square) cardboard box ahead in your lane. You should

- ✓ steer around it without making a sudden or unsafe move.

You have no way of knowing what may be inside a seemingly harmless-looking object on the roadway. Even cardboard boxes, paper or cloth sacks, or plastic containers may contain some solid or heavy material or a sharp object capable of causing damage. Always scan the roadway at least 12 to 15 seconds ahead so that you can spot such obstacles in time to steer around them safely.

37. When should you review the post-trip inspection report from the previous driver?

- ✓ You should review it during your pre-trip inspection.

Before performing the pre-trip inspection on your vehicle, review the previous driver's post-trip inspection report. Check whether all problems discovered by the last driver have been repaired.

38. You can see a sign on a vehicle ahead of you. The sign is a red triangle with an orange center. What does the sign tell you about the vehicle?

- ✓ It is a slow-moving vehicle.

This emblem on the rear of a vehicle identifies it as a slow-moving vehicle. The legal definition of "slow-moving vehicle" can vary slightly from one state to another, but it typically means a vehicle that doesn't normally travel faster than 25 mph. Slow-moving vehicles include farm equipment, animal-drawn carts, and roadway maintenance vehicles. Vehicles that travel this slowly represent hazards. Spotting one early can help prevent a crash.

39. Serious traffic violations that can cause your CDL license to be suspended include

- ✓ excessive speeding (15 mph or more above the posted limit), improper lane changes, reckless driving, and following a vehicle too closely.

You will lose your CDL for at least 60 days if you commit two serious traffic violations in a CMV within a three-year period. Some examples of serious traffic violations are excessive speeding, reckless driving, erratic lane changes, and following too closely (tailgating).

40. During a pre-trip inspection, you discover an exhaust leak or power steering leak. You should

- ✓ report the problem and make arrangements to use another vehicle.

Report any problems that could jeopardize your safety or that of others or lead to a breakdown. Don't drive the vehicle until those defects are corrected. Obviously the steering system is critical and must be in good working order. An exhaust system leak could let poisonous fumes into your cab or sleeper berth.

41. The best drivers are those who watch and prepare for hazards. This is called being

- ✓ defensive.

The National Safety Council defines defensive driving as "driving to save lives, time, and money, in spite of the conditions around you and the actions of others." Defensive driving is about anticipating potentially dangerous situations in advance, including driving conditions and mistakes made by others, and planning how to deal with those situations. To be a defensive driver, you must constantly scan for hazards all around your vehicle. When you spot a hazard, think about the emergencies that might develop from it and formulate plans to deal with them.

42. Name some things you should check on the FRONT of your vehicle during your pre-trip inspection.

- ✓ Low beams, high beams, four-way flashers, and turn signals.

During Step 4 and Step 5 of the Seven-Step Inspection Method, you'll check the various lights at the front of your vehicle to make sure that they're all working properly.

43. In your pre-trip inspection, you are checking your steering and exhaust systems. Which of these problems should be fixed before the vehicle is driven?

- ✓ Steering play in excess of 10 degrees.

If there is more than 10 degrees of play in your steering wheel, your vehicle will be harder to steer. Have the problem corrected before you drive the vehicle. In cold weather, white exhaust "smoke" that soon disappears may just be water vapor from condensation. However, if white smoke persists long after the vehicle has warmed up, have the condition checked.

44. For combination vehicles, what is true about drive-wheel braking skids?

- ✓ The trailer can push the tractor sideways.

The most common type of skid by far is the drive-wheel skid. Drive-wheel acceleration skids can occur on slippery roads. Drive-wheel braking skids occur when braking causes the drive wheels to lock. Because locked wheels have less traction than rolling wheels, the rear wheels usually slide sideways in an attempt to "catch up" with the front wheels. With combination vehicles, a drive-wheel skid can let the trailer push the tractor sideways, causing a sudden jackknife.

45. What should you NOT do in the event of hydraulic brake failure?

- ✓ Shift up.

If your hydraulic brakes fail while you're driving, try pumping the brake pedal to build up enough hydraulic pressure to stop your vehicle. If this fails, downshift to use engine braking and apply the parking brake. Release the parking brake before you lock the wheels. If all else fails, look for an escape route. Head for an escape ramp or an open field and let your vehicle slow to a stop.

46. A car suddenly cuts in front of you, creating a hazard. What should you NOT do?

- ✓ Honk and stay close behind the car.

Always maintain a safe following distance behind the vehicle in front of you. If another vehicle suddenly cuts in front of you, either slow down or change lanes to maintain a safe following distance. Tailgating another vehicle is dangerous. For a CMV driver, federal regulations consider tailgating a serious violation. You will lose your CDL for at least 60 days if you are convicted of two serious violations involving a CMV within a three-year period. [49 CFR 383.51]

47. If you are being tailgated, you should

- ✓ increase your following distance.

Tailgating is a major cause of rear-end collisions. If you're being tailgated, increase your following distance behind the vehicle ahead of you. That way, if you have to stop or slow down, you can do so gradually, reducing the risk of being rear-ended by the tailgater. It will also make it easier for the tailgater to pass you.

48. What is true about warning other drivers of a stopped vehicle?

- ✓ Move the rear reflective triangle back if the driver's vision is obscured to within 500 feet.

Other drivers should be able to see your stopped vehicle or its warning devices from at least 500 feet away in either direction. If your vehicle is obscured by a hill or curve, set out a warning device up to 500 feet behind your vehicle.

49. What is NOT true about backing a heavy vehicle?

- ✓ You should back slowly until you slightly bump into the dock.

To make backing up easier and safer, turn toward the driver's side so you can watch the rear of your vehicle through your window. Have a helper stand near the rear of your vehicle and observe areas that you cannot. He or she can signal you to stop before you hit something.

50. What is the definition of "sleep debt?"

- ✓ The cumulative effect of not getting enough sleep.

Sleep debt is a dangerous condition in which missing sleep adds up until you risk falling asleep at the wheel unless you get some rest. People are often surprised that getting less than 6 hours of sleep per night triples the risk of an accident. At least 15% of heavy truck crashes are believed to involve driver fatigue. Before a trip, you should get adequate sleep (adults need 8 to 9 hours to maintain alertness).

51. It is important to shift gears correctly to keep

- ✓ control of the vehicle.

For full control of your vehicle, you need to know when and how to upshift or downshift. Learn under what special conditions you should downshift. For example, learn how to use engine braking to slow your vehicle on a steep descent.

52. Cargo that can shift should have at least _____ tie-downs(s).

- ✓ two

The rule is one tie-down for every ten feet of cargo but at least two tie-downs regardless of how small the cargo is.

53. The reaction distance is the distance traveled from the time

- ✓ the brain tells the foot to push the brake pedal to the time the foot actually pushes the pedal.

Total stopping distance is the sum of your perception distance (how far your vehicle goes from when you see the hazard until your brain processes it), reaction distance (how far the vehicle goes from when your brain orders your foot to take action until your foot actually starts to brake), and braking distance (how far the vehicle continues to travel once you apply the brake). An average driver's perception time is about 1 3/4 seconds. His or her reaction time is between 3/4 second and 1 second. (Note: 55 mph is equal to about 81 feet per second. At this speed, a reaction time of 3/4 second is equivalent to a reaction distance of 61 feet.)

54. Bridge formulas permit

- ✓ less maximum axle weight for axles that are close together.

The axle weight is the maximum weight that an individual axle or set of axles can support. When a vehicle's axles are relatively close together, a high axle weight risks overloading bridges and roadways. To avoid overloading bridges, a bridge formula is often used to specify a lower maximum axle weight for axles that are closer together. The US Department of Transportation uses such a bridge formula to establish the maximum axle weights on interstate highways.

55. What is true about cargo loading?

- ✓ State laws dictate legal weight limits.

You are always responsible for making sure your vehicle and its cargo meet all legal weight limits imposed by states. States impose limits on both vehicle weights and axle weights.

56. What is true about tank vehicles?

- ✓ Special skills are required to haul liquid tanks.

It takes special skills to drive a tank vehicle safely. A fully loaded tanker can be less stable and more prone to rollovers than other types of CMVs. To legally drive a tank vehicle with a rated capacity of 1,000 gallons or more, you must obtain a Tank Vehicle (N) endorsement on your CDL.

57. A vehicle is loaded with most of the weight on the steering axle. What may result?

- ✓ Hard steering and possible damage to the tires.

Keep your load of cargo balanced. You need enough weight on both the steering and drive axles for adequate traction. However, too much weight on the steering axle can result in hard steering and even damage the steering axle and tires. Too much weight on one side can increase the risk that the cargo will shift.

58. You are starting your vehicle from a stop. As you apply power to the drive wheels, they start to spin. You should

- ✓ take your foot off the accelerator.

If so much power is applied to the drive wheels that it overcomes the tires' grip of the road, the wheels will spin. This is more likely to occur if the road surface is slippery. To stop the drive wheels from spinning, take your foot off the accelerator. Accelerate slowly and gently from now on.

59. When must you wear a seat belt?

- ✓ Whenever you're driving a CMV.

Federal regulations require the driver and all passengers in a moving CMV to wear seat belts (unless, of course, the vehicle isn't equipped with them). [49 CFR 392.16]

60. When you're driving at 55 mph under good driving conditions, your total stopping distance will be

- ✓ at least 419 feet.

At 55 mph under good driving conditions, your total stopping distance will be at least 419 feet: 142 feet of perception distance + 61 feet of reaction distance + 216 feet of braking distance. (The length of a football field including the two end zones is 360 feet.) Under poor driving conditions, the total stopping distance will probably be even longer.

61. Tie-downs must be of the proper type and strength. According to federal regulations, the aggregate working load limit of the cargo tie-downs must be enough to secure

- ✓ one-half times the weight of the cargo tied down.

Under federal regulations, the aggregate working load limit of the tie-downs used to secure cargo must be at least one-half times the weight of the cargo. Federal regulations also specify a formula to compute the aggregate working load limit of the tie-downs from the working load limits of the individual tie-downs. The working load limit of an individual tie-down is defined as the maximum load that may be applied to it, as specified by its manufacturer. [49 CFR 393.106], [49 CFR 393.5]

62. When should you downshift an automatic transmission?

- ✓ When going down grades.

To use engine braking on a downgrade to control the speed of a CMV with an automatic transmission, select a low gear range that prevents the transmission from shifting up beyond the selected gear.

63. You are driving a heavy vehicle and must exit a highway using an off ramp that curves downhill. You should

- ✓ slow down to a safe speed before taking the curve.

On curves, the posted speed may be safe for cars but not for CMVs, especially CMVs that are more prone to rollovers. Slow down to a safe speed before you enter the curve. Taking a curve too fast can cause a rollover. Braking in a curve can cause a skid (or even a jackknife if you're pulling a trailer).

64. What three things related to cargo are the driver's responsibility?

- ✓ Inspecting the cargo, recognizing overloads, and properly securing the cargo.

As a commercial truck driver, you are responsible for the cargo you carry. This includes making sure it is balanced, secured, and not overloaded. If the cargo contains hazardous materials, you must also inspect it for proper labels, shipping papers, and placards.

65. What effects can wet brakes cause?

- ✓ Brakes can grab or become weak.

Brakes use friction to convert the kinetic energy of your moving vehicle into heat. If the brakes get wet, the brake shoes or brake pads may produce less friction. The brakes will grab, apply unevenly, or become weak. When you try to brake, your braking distance may increase, your vehicle may pull to one side, or the wheels may lock. On a wet road, locked wheels can cause a skid (or even a jackknife if you're pulling a trailer).

66. How far ahead should you look?

- ✓ 12-15 seconds

While driving, you should scan the road 12–15 seconds ahead. At speeds that are typical of urban areas, your vehicle will travel about one block in 12–15 seconds. At 60 mph, your vehicle will travel a quarter of a mile in 15 seconds.

67. You should try to park your vehicle so that

- ✓ you can pull forward when you leave.

Avoid backing your vehicle whenever possible. For example, when you park, do so in a way that will let you drive forward, not backward, to exit the parking space.

68. How many red reflective triangles should you carry?

- ✓ Three.

Your emergency equipment should include three reflective triangles, six fusees, or three liquid burning flares. On a divided highway, place reflective triangles 10 feet, 100 feet, and 200 feet behind your stopped vehicle.

69. It takes the body about _____ hours to get rid of the alcohol in four drinks.

- ✓ four

The liver processes about one-third of an ounce of alcohol per hour, which is equivalent to at most one drink per hour.

70. What is the minimum tread depth for front (steering) tires?

- ✓ 4/32 inch.

Front steering tires require a tread depth of at least 4/32 inch. All other tires must have a tread depth of at least 2/32 inch.

71. How does "bleeding tar" affect the road surface and driving conditions?

- ✓ Tar rises to the road surface in very hot weather, causing the roads to become very slippery.

On hot days, tar in the pavement can rise to the surface and create a slippery film on the road surface.

72. Can federal inspectors inspect your truck or bus?

- ✓ Yes, and they might place it out of service.

Federal or state inspectors may inspect your vehicle. If they find a problem that makes the vehicle potentially unsafe, they will put the vehicle out-of-service until the problem is fixed.

73. You are driving a 40-foot vehicle at 35 mph. The road is dry and visibility is good. What is the least amount of space you should keep in front of your vehicle to be safe?

- ✓ 4 seconds.

The formula for following distance is one second per ten feet of vehicle, plus an extra second if you are traveling over 40 mph. Therefore, for a 40-foot vehicle traveling at 35 mph, you should leave a following distance of four seconds.

74. Converter dollies built on or after March 1, 1998 are required to have anti-lock brakes. These dollies will have

- ✓ a yellow malfunction lamp on the left side of the dolly.

If the converter dolly has ABS, there will be an ABS malfunction light on the left side.

75. You do not have a Hazardous Materials Endorsement on your commercial driver's license. You can drive a vehicle hauling hazardous materials when

- ✓ the vehicle does not require placards.

You must have a hazardous materials endorsement on your CDL to drive a vehicle that is placarded for hazardous materials. However, not all packages of hazardous materials require placarding your vehicle. Federal regulation 49 CFR 172.500 exempts certain amounts and types of hazardous materials from placarding, but states may impose more stringent requirements.

76. How can you avoid wet brake problems?

- ✓ Slow down, shift to a low gear, and gently apply the brakes.

If you must drive through water, slow down, shift into a low gear, and keep applying the brakes gently to prevent water, mud, or other contaminants from getting into the brakes.

77. On a two-way, two-lane road, if you must stop on a hill, how far back should you place your reflective triangles?

- ✓ Within 500 feet behind the vehicle.

If you park on the side of the road and the view of your vehicle is obscured by a hill or curve, place a reflective triangle far enough (up to 500 feet) behind your vehicle so it can be seen by other drivers.

78. What is your most valuable way to see the sides and rear while driving?

- ✓ Check your mirrors regularly.

To find out what's happening behind and to the sides of your vehicle, check your mirrors frequently. Before driving your vehicle, adjust your mirrors to show parts of your vehicle as well as what's around your vehicle.

79. Where or when should you test the stopping action of your service brakes?

- ✓ When the vehicle is moving at about 5 mph.

To test the service brakes, do the following: Wait for normal air pressure, release the parking brake, move the vehicle forward at about 5 mph, and apply the brakes firmly. Check whether the brakes stop your vehicle promptly, and note any abnormal signs such as your vehicle pulling to one side.

80. How do you correct a drive-wheel acceleration skid?

- ✓ Stop accelerating.

To recover from a skid, first stop doing what caused it in the first place. To recover from a drive-wheel acceleration skid, first take your foot off the accelerator. To recover from a drive-wheel braking skid, stop braking. To recover from a front-wheel skid that was caused by driving too fast for current conditions, slow down.

81. Why should you be in the proper gear before starting down a hill?

- ✓ You will not be able to shift into a lower gear once you are going down a hill.

When you're about to start down a steep downgrade, release the gas pedal, shift into a low gear, and use engine braking to slow your vehicle. Don't try to downshift after your speed has already built up. You will not be able to shift into a lower gear then. You may not even be able to get back into any gear and all engine braking effect will be lost. If you try to downshift an automatic transmission after your speed has already built up, you may damage the transmission.

82. To avoid a crash, you had to drive onto the right shoulder. You are now driving at 40 mph on the shoulder. How should you move back onto the pavement?

- ✓ If possible, come to a complete stop before steering back onto the pavement.

If you're forced to steer onto the shoulder to avoid a collision, try to come to a complete stop before you move back onto the road. Moving back onto the road at high speed could cause you to lose control.

83. When approaching a traffic light that has been green for a long time, you should

- ✓ start to slow down so you will be ready to stop.

A traffic light that has been green for a long time is probably about to change to a yellow and then a red light. When approaching such a green light, slow down and be prepared to stop. Never speed up in an attempt to "beat the light" before it turns red.

84. Containerized loads

- ✓ are typically used for freight carried partway by rail or ship.

Containerized loads usually travel partway by rail or ship. They are transported by truck at the start or toward the end of their journey. Containerized loads are sealed. Usually, you are not allowed to break the seals to inspect them. However, you are responsible for ensuring that the load is secured on your vehicle and it won't cause your vehicle to exceed gross weight or axle weight limits.

85. To prevent skidding, you should

- ✓ adjust to conditions while driving.

To prevent a skid or a rollover, adjust your speed and driving style to fit current driving conditions.

86. If you have been drinking alcohol, before you drive, you should

- ✓ wait for it to wear off.

Your body breaks down alcohol at a predictable rate. Typically, this is one standard drink per hour, where one standard drink equals 1.5 ounces of hard liquor, 5 ounces of wine, or 12 ounces of beer. Neither coffee nor fresh air nor a cold shower can increase that rate. You need to wait until the alcohol has been broken down.

87. If you do not have a CB radio, what is the first thing you should do at an accident scene?

- ✓ Protect the accident scene.

At an accident scene, first protect the accident scene to help prevent another accident. Pull your vehicle as far away from traffic and as close to the side of the road as possible. Set out warning devices such as reflective triangles.

88. Implied consent means that when you sign the driver's license application form, you

- ✓ consent to be tested for alcohol in your blood.

When you operate a CMV on public roads, you imply consent to be tested for blood alcohol concentration (BAC) upon the request of law enforcement. If you are convicted of refusing to be tested, you will lose your CDL for at least one year if this was your first offense. [49 CFR 391.15]

89. When driving at night, use your low beams when an oncoming vehicle is within

- ✓ 500 feet.

To prevent blinding other drivers at night, dim your headlights to low beams whenever you are within 500 feet of an oncoming vehicle.

90. If a straight vehicle (no trailer or articulation) goes into a front-wheel skid, it will

- ✓ go straight ahead even if the steering wheel is turned.

In a front-wheel skid, the front end tends to go in a straight line regardless of how much you turn the steering wheel.

91. The total weight of the powered unit, the trailer, and the cargo is called

- ✓ gross combination weight.

The Gross Combination Weight is the sum of the gross vehicle weight (GVW) of the power unit and the GVW of each towed unit. (A vehicle's GVW is its weight when fully loaded.)

92. You should back and turn toward the driver's side

- ✓ so you can watch the rear of the vehicle by looking out the side window.

Because of the limited visibility, avoid backing up whenever possible. If you must back your vehicle, back toward the driver's side. You'll be able to watch the rear of your vehicle from your driver's side window. Also use a helper if possible. The helper can stand near the rear of your vehicle and keep an eye on your blind spots. He or she can signal you to stop before an accident can occur.

93. Stab braking

- ✓ involves releasing the brakes only after the wheels lock up.

In the stab braking method, you fully apply the brakes until the wheels lock. Then you release the brakes. Reapply them as soon as the wheels start to roll again. Repeat. (Note: Since this method involves deliberately locking the wheels, don't use it on a vehicle with antilock brakes. Use controlled braking instead.)

94. The oil pressure gauge should come up to normal within how long after starting the engine?

- ✓ Seconds.

Once you've started the engine, you should see the oil pressure gauge immediately begin a gradual rise to the normal operating range.

95. When backing, why is it important to have a helper?

- ✓ There are blind spots you can't see.

If you can, use a helper when backing up. Even with all your mirrors, there are still blind spots that you cannot see. The helper can stand near the rear of your vehicle and keep an eye on your blind spots. He or she can signal you to stop before an accident can occur.

96. For your safety, when setting out reflective triangles, you should

- ✓ hold the triangles between yourself and oncoming traffic.

As you carry the reflective triangles to place them around your vehicle, hold them between yourself and traffic to help you stay visible to other drivers.

97. The "load" means

- ✓ the maximum safe weight a tire can carry at a specified pressure.

The tire load rating is the maximum weight that a tire can safely carry at a specified tire pressure. This figure is stated on the side of the tire.

98. When inspecting mirrors and windshields for cracks, dirt, illegal stickers, and other obstructions to your vision, you should

- ✓ clean and adjust as necessary.

Before driving, make sure your field of view is clear. Check that your windshield and mirrors are clean, free of obstructions, and free of cracks. Also adjust your mirrors for an optimum view.

99. You must park on the side of a level, straight, undivided two-lane road. Where should you place the reflective triangles?

- ✓ One within 10 feet of the rear of the vehicle, one about 100 feet to the rear, and one about 100 feet in front of the vehicle.

This is required by federal regulation 49 CFR 392.22. This regulation also specifies where to place warning devices on other types of roadways such as curves, one-way roads, and divided roadways.

100. You are driving a new truck with a manual transmission. To take a long, steep downhill grade,

- ✓ use a lower gear than you would use to climb the hill.

With older trucks, you typically use the same gear for driving uphill and driving downhill. Today's trucks tend to have more powerful engines and be more efficient than older trucks. Hence, you can drive such a truck uphill in higher gears than you would use to drive downhill with engine braking.

101. What is black ice?

- ✓ A thin layer of ice clear enough that you can see the road underneath it.

Black ice is a thin layer of ice that is clear enough for you to see the road beneath. The road merely looks wet rather than icy.

102. Truck escape ramps

- ✓ are designed to stop runaway vehicles safely without injuring drivers and passengers.

Escape ramps are located on many steep mountain grades. Escape ramps are built to stop runaway vehicles safely without injuring drivers or passengers. Escape ramps use a long bed of loose, soft material such as gravel to slow a runaway vehicle, sometimes in combination with an upgrade. Regardless of the type of vehicle you're driving or the other options open to you to stop your runaway vehicle, always look for one of these escape ramps. They can save lives, equipment, and cargo.

103. What should you do if you get stuck on the railroad tracks?

- ✓ Get out of your vehicle and away from the tracks.

If your vehicle gets stuck on a railroad track, get everyone including yourself out of your vehicle. Have everyone walk at about a 45-degree angle to the tracks in the direction from which you expect a train to approach. That way, if your vehicle is hit, none of you will be struck by flying debris. Once you've reached a safe location, call 911 or the telephone number on the railroad crossing sign.

104. What checks should you perform on the steering gear box?

- ✓ The steering box should not be missing any nuts, bolts, or cotter keys.

When you turn the steering wheel, the steering gear box translates the rotation of the steering column into the turning of the wheels on the steering axle. When you inspect the steering, check that the steering box is securely mounted; neither it nor the hoses connected to it are leaking; and no nuts, bolts, or cotter keys are missing.

105. If the vehicle in front of you is smaller than yours, it can probably

- ✓ stop faster than you.

Large vehicles like CMVs tend to have longer braking distances than smaller vehicles. Always maintain an adequate following distance behind the vehicle in front of you. Otherwise, if it suddenly slows down, you may not have enough space to avoid rear-ending it.

106. If you need to leave the road in a traffic emergency, you should

- ✓ avoid braking until your speed has decreased to about 20 mph.

If you've moved onto a shoulder that may have a loose surface, let your vehicle slow down to about 20 mph before you brake. Braking at a higher speed on a loose surface can cause a skid.

107. Before transporting a sealed load, you must check that

- ✓ the load is properly secured.

You are not responsible for the state of the contents of a sealed container, nor can you inspect those contents. You are only responsible for the safety of the cargo, ensuring that it is balanced, secured, and not overloaded, and does not get in the way of emergency equipment.

108. As your blood alcohol concentration (BAC) rises, what happens?

- ✓ Judgment and self-control are affected.

Alcohol affects the body in many different ways, but it first affects your judgment and self-control. As a result, you may not realize how drunk you are becoming, and you may start to make dangerous decisions.

109. According to the driver's manual, why should you limit the use of your horn?

- ✓ It can startle other drivers.

Your horn can startle other drivers, pedestrians, or animals. Hence, it should only be used to warn others of a potential hazard, not for general communication and certainly not to express anger or frustration.

110. Why make emergency plans when you see a hazard?

- ✓ To protect yourself and others.

The National Safety Council defines defensive driving as "driving to save lives, time, and money, in spite of the conditions around you and the actions of others." Defensive driving is about anticipating potentially dangerous situations in advance, including driving conditions and mistakes made by others, and planning how to deal with those situations. To be a defensive driver, you must constantly scan for hazards all around your vehicle. When you spot a hazard, think about the emergencies that might develop from it and formulate plans to deal with them.

111. Every time you park your vehicle and shut the engine off, you should

- ✓ apply the parking brake.

Whenever you park your vehicle, set the parking brakes. There are only two exceptions: (1) If the brakes are very hot, applying the parking brakes might damage them. (2) If the brakes are wet, applying them in cold temperatures might cause them to freeze, immobilizing your vehicle. In these two situations, use wheel chocks instead.

112. What is hydroplaning?

- ✓ When the tires skim over the road surface

On a wet road at lower speeds, modern tires will usually channel water away to maintain contact with the road. However, in deep water at higher speeds, the channeling action of the tires becomes less effective and the tires start to ride on a layer of water like water skis. This is called “hydroplaning.” It may result in a loss of braking and steering control.

113. You should use a helper to help back your vehicle

- ✓ when possible.

Large vehicles can have large blind spots. Whenever you back a CMV, have a helper stand near the rear of your vehicle and observe areas that you cannot. He or she can signal you to stop before an accident can occur.

114. Which of these is a danger of crossing railroad tracks on dirt roads?

- ✓ You could get hung up halfway across.

Many drivers forget about the space under their vehicles. That space can be very small when a vehicle is heavily loaded. This is often a problem on dirt roads and in unpaved yards. Don't take a chance on getting hung up. Drainage channels across roads can cause the ends of some vehicles to drag. Cross such depressions carefully. Railroad tracks can also cause problems, particularly when pulling trailers with a low underneath clearance. Don't take a chance on getting hung up halfway across.

115. What is the new blood alcohol concentration (BAC) for commercial drivers to be considered intoxicated when driving a commercial vehicle?

- ✓ 0.04.

You will lose your CDL for at least one year if you are convicted of driving a CMV while your BAC is 0.04% or above.

116. Under federal regulations, if a vehicle is carrying a load that is more than two feet wide and extends more than four feet beyond the rear of the vehicle, _____ must be placed at the extreme end of the load.

- ✓ two red flags

Under federal regulations, if the load is more than two feet wide and extends more than four feet behind the rear of the CMV, two square red flags must be placed at the end of the load. If the load is no more than two feet wide, one square red flag will suffice. [49 CFR 393.87] To find out more about your state's requirements or to apply for a transit permit, check with your state's department of transportation.

117. You are driving a 40-foot vehicle at 50 mph. Driving conditions are ideal (dry pavement, good visibility). What is the least amount of space that you should keep in front of your vehicle to be safe?

- ✓ 5 seconds

The formula for following distance is one second per ten feet of vehicle, plus an extra second if you are traveling over 40 mph. Therefore, for a 40-foot vehicle traveling at 50 mph, you should leave a following distance of 5 seconds.

118. When you check the condition of visible parts during your pre-trip inspection, make sure that the _____ are secured against snagging, rubbing, or wearing.

- ✓ air lines and electrical wiring

During your pre-trip inspection, check the air lines and electrical cables for any signs of wear, snagging, or rubbing.

119. Stab braking should not be used on vehicles with

- ✓ anti-lock brakes.

In stab braking, you deliberately keep locking and unlocking the wheels. Hence, stab braking should not be used on a vehicle with antilock brakes. Use controlled braking instead.

120. When a doctor prescribes medication for you and you know you will be driving, you should

- ✓ ask the doctor if the medication will affect your ability to drive.

Some prescription drugs can impair your driving abilities. If your doctor prescribes a medication for you, be sure to ask him or her if the medication can impair your driving abilities.

121. Dry bulk tanks and hanging meat

- ✓ are unstable loads.

Dry bulk tanks and hanging meat are two cargoes with high centers of gravity. Plus, hanging meat sways significantly when you're driving on a curve, making for a very unstable load.

122. If you are convicted for driving under the influence (DUI) while driving a commercial vehicle, and this is your first offense, you will most likely get

- ✓ at least a one-year suspension of your CDL.

If you are convicted of DUI for the first time, you will be disqualified from driving CMVs for at least one year and you may also face criminal penalties. If you are convicted of a second DUI offense, you will lose your CDL for life. [49 CFR 383.51]

123. When looking ahead of your vehicle while you are driving, you should look

- ✓ back and forth, near and far.

When driving your vehicle, look ahead a full 12–15 seconds. Be aware of what is happening all around your vehicle, both farther from it and closer to it. Keep shifting your attention back and forth, near and far, left and right, so that you can constantly scan all these areas.

124. A key principle to remember about loading cargo is to keep the load

- ✓ balanced in the cargo area.

Keep your load of cargo balanced. You need enough weight on both the steering and drive axles for adequate traction. However, too much weight on the steering axle can cause hard steering and even damage the steering axle and tires. Too much weight on one side can increase the risk that the cargo will shift.

125. Your blood alcohol concentration (BAC) depends on your

- ✓ body weight.

Your blood alcohol concentration (BAC) is affected by how much alcohol you drink, how quickly you drink it, and how much you weigh. The larger your body, the larger the volume through which the alcohol has to spread.

126. Brake fade

- ✓ can be caused by the brakes becoming too hot.

Brakes use friction to convert the kinetic energy of your moving vehicle into heat. However, overuse of the brakes (which can happen if you don't use engine braking enough) can generate so much heat that brakes can fade (lose their effectiveness) or fail.

127. Underloaded front axles can cause

- ✓ unsafe steering and poor traction.

Cargo must be loaded to keep the weight of the vehicle properly balanced. If there's not enough weight over the front axle, the front tires won't have enough traction for the vehicle to be steered safely.

128. To correct a drive-wheel braking skid, you should

- ✓ countersteer.

To correct a drive-wheel braking skid, stop braking so the drive wheels will unlock. However, as your vehicle turns back on course, it may overshoot and start to skid in the opposite direction. Quickly countersteer to counteract this tendency.

129. Whenever you stop for a break during your trip, you should

- ✓ check critical items such as the tires, brakes, and cargo tie-downs.

Whenever you stop during your trip, check safety-critical items such as brakes, tires, lights, and coupling devices if any. Also make sure that your cargo is still secure.

130. Which of these statements about driving in areas with strong winds is true?

- ✓ Wind is a big problem when your truck comes out of a tunnel.

Inside a tunnel, you don't feel the effect of crosswinds pushing you sideways. But once you emerge from the tunnel into an open space, the crosswinds will hit you. If your vehicle is traveling alongside another vehicle, there is some chance that the crosswinds will push one of the vehicles against the other.

131. You should schedule your driving

- ✓ for the hours you are normally awake.

To help prevent drowsiness while driving, schedule your trips for the hours during which you are normally awake, not the middle of the night. Get plenty of sleep (8–9 hours) before each trip.

132. If you go twice as fast, your stopping distance will increase by

- ✓ four times.

You should always be able to stop within the distance you can see ahead. Fog, rain, or other conditions may require that you slow down to be able to stop in the distance you can see. Trucks that are empty or only lightly loaded take longer to stop because the stiff suspension springs and strong brakes give poor traction and make it easier to lock the wheels. When you increase your speed, your braking distance increases by roughly the square of the speed increase. Therefore, if you double your speed, your braking distance will be four times as long as before.

133. What is the first thing you should try to do if your brakes fail while driving downhill?

- ✓ Get off the road as soon as possible.

If your brakes fail while traveling downhill, use an escape ramp if one is available. If not, escape onto an open field or a side road that flattens out or turns uphill.

134. What should you do before driving if you are sleepy?

- ✓ Get some sleep.

Caffeine pills or caffeinated drinks can increase awareness – for a few hours. But as with most other stimulants, after the caffeine wears off, you may "crash" (feel even more drowsy and tired than you did before the caffeine). The only real cure for sleepiness is sleep.

135. What should the wheel bearing seals be checked for?

- ✓ The hub oil level and possible leaks

It can be unsafe to drive with a damaged wheel bearing. Therefore, inspect each wheel bearing for leaks that can allow grease to seep out or dirty water to seep in. The wheel bearing is located behind the wheel. Check for grease on the wheel and any other evidence of cracks or leaks in the wheel bearing.

136. What are some advantages of going right instead of left around an obstacle?

- ✓ You can avoid a head-on collision or someone may be passing to the left.

Steering to the left of a hazard can cause you to move into the path of an oncoming vehicle or a vehicle that is trying to pass you on the left.

137. Hydroplaning

- ✓ is more likely when the tire pressure is low.

Hydroplaning is more likely if traction is low. This can happen if the tire treads are worn or the tire pressures are low (because there is less pressure pushing down on the road to supply traction).

138. Controlled braking

- ✓ is used to keep a vehicle in a straight line when braking.

In controlled braking, you apply the brakes as hard as you can without locking the wheels, keeping movement of the steering wheel to a minimum.

139. How long does it take a typical tractor-trailer to clear a single railroad track? A double railroad track?

- ✓ It takes 14 seconds to clear a single track and more than 15 seconds to clear a double track.

A typical tractor-trailer will take at least 14 seconds to fully clear a single railroad track and more than 15 seconds to fully clear a double track.

140. What should you do if a car coming toward you at night keeps its high beams on?

- ✓ Look toward the right edge of your lane or the right edge of the road.

If an oncoming vehicle has not dimmed its headlights, don't retaliate with your own high beams. Instead, slow down, keep right, look away from the vehicle, and steer by the right edge of the road until the vehicle has passed you.

141. When you are passing another vehicle, pedestrian, or bicyclist, you should assume that they

- ✓ may move into your traffic lane.

When passing another vehicle, pedestrian, or bicyclist, assume that they have not seen you and might move into your way. Communicate your presence to them and proceed with caution.

142. How can you test the parking brake?

- ✓ Set the parking brake and pull forward gently.

The parking brake is meant to keep your vehicle from moving. The best way to test it is to apply the parking brake and then try to pull forward gently. The parking brake should hold your vehicle in place. If you're pulling one or more trailers, test each trailer's parking brakes in the same way.

143. A driver's logbook

- ✓ must be shown immediately when an officer requests it.

If you're transporting hazardous materials, a law enforcement officer may stop you to inspect your vehicle. The officer may check your logbook (or electronic logging device), shipping papers, vehicle placards, and the HazMat endorsement on your CDL. If your logbook is not up to date, you may be cited and placed out-of-service for some specified amount of time.

144. Is it legal to drive with one-fourth of a vehicle's leaf springs broken or missing?

- ✓ No.

If one-fourth or more of the leaves in any leaf spring are broken or missing, the vehicle will be put out of service until the problem is repaired.

145. The braking effect of the engine is greatest when the engine is _____ the governed rpm and the transmission is in the _____ gears.

- ✓ near; lower

The engine braking effect is strongest when the transmission is in a low gear and the engine is operating near the governed rpm's. Note: Engine braking is NOT the same thing as using a retarder or Jake Brake. Engine braking simply relies on low gears and the partial vacuum in the engine at idle to prevent your vehicle from going too fast.

146. Which piece of emergency equipment must be carried in a CMV?

- ✓ Warning devices.

Federal regulations require every CMV to carry one of the following warning devices in case the driver must stop the CMV on the road: three reflective triangles, three liquid-burning flares, or six fusees. Federal regulations also require every CMV to carry a fire extinguisher. Your state may also require a first-aid kit or seat belt cutter be carried on certain types of CMVs such as school buses. [49 CFR 393.95]

147. To avoid rollbacks when you start, you should

- ✓ partly engage the clutch before you take your right foot off the brake.

When you start your vehicle, avoid rolling backward or else you may hit someone behind you. Set the parking brake whenever necessary to keep from rolling back. Release the parking brake only when you have applied enough engine power to keep from rolling back. If you have a manual transmission vehicle, partly engage the clutch before you take your right foot off the brake. On a tractor-trailer equipped with a trailer brake hand valve, the hand valve can be applied to keep from rolling back.

148. What three things add up to total stopping distance for your truck or bus?

- ✓ Perception distance, reaction distance, braking distance.

Total stopping distance is the sum of your perception distance (how far your vehicle goes from when you see the hazard until your brain processes it), reaction distance (how far the vehicle goes from when your brain orders your foot to take action until your foot actually starts to brake), and braking distance (how far the vehicle continues to travel once you apply the brake).

149. When you're driving in cold weather, your tires must

- ✓ provide enough traction to steer and push the vehicle through snow.

Snow-covered road surfaces provide much less traction than dry surfaces. Your tires must provide enough traction to maneuver your vehicle on snow safely. Under federal regulations, your front tires must have a tread depth of at least 4/32 inch, and all other tires must have a tread depth of at least 2/32 inch. For best traction, however, make sure that the treads are even deeper before you try to drive on snow. [49 CFR 570.62]

150. What is a "pull-up?"

- ✓ Pulling forward while backing a trailer to reposition it

When backing a vehicle, especially a tractor-trailer, you may need to pull forward to straighten the vehicle or reposition it for a better angle. This corrective maneuver is called a pull-up. Note, however, that you should be able to back your vehicle successfully without too many such corrections. During your CDL skills test, your examiner may penalize you for too many pull-ups.

151. What should you do if your vehicle hydroplanes?

- ✓ Release the accelerator.

Hydroplaning is more likely at higher speeds. If your vehicle starts to hydroplane, avoid braking. Instead, release the accelerator and push in the clutch to let your vehicle slow down.

152. If you have a heavy load that is slowing you down on an upgrade, you should

- ✓ shift into a lower gear.

Trucks with heavy loads are often slower when going uphill. In this situation, keep right and shift into a lower gear for more torque if possible.

153. Convex curved mirrors

- ✓ show a wider area than flat mirrors.

A convex mirror has a wider field of view than a flat mirror. However, objects viewed in a convex mirror look smaller and farther away than they really are. Bear this in mind when you're trying to judge the distance of an object that you're viewing in a convex mirror.

154. You are driving on a straight, level highway at 50 mph. There are no vehicles in front of you. Suddenly a tire blows out. What should you do first?

- ✓ Stay off the brakes until the vehicle slows down on its own.

If a tire blows out, don't brake. Braking could cause you to lose control. Instead, let your vehicle slow itself down. Then brake very gently and pull over.

155. How do you correct a drive-wheel acceleration skid?

- ✓ Stop accelerating.

To recover from a skid, first stop doing what caused it in the first place. To recover from a drive-wheel acceleration skid, first take your foot off the accelerator. To recover from a drive-wheel braking skid, stop braking. To recover from a front-wheel skid that was caused by driving too fast for current conditions, slow down.

156. While driving, ice builds up on your wipers and they no longer clean the windshield. You should

- ✓ stop safely and fix the problem.

If your view through the windshield is obscured because your windshield wipers aren't clearing the windshield, pull over as soon as possible and fix the problem. Remember: If you can't see, you can't drive.

157. To help you stay alert while driving, you should

- ✓ take short breaks before you get drowsy.

The monotony and boredom of a long drive can lead to highway hypnosis and drowsiness. To prevent this, stop for a break about once every two hours or 100 miles. Some cold and allergy medications can cause drowsiness, sedation, or disturbed coordination, which makes them dangerous for CMV operators. If you are unsure about the effects of a particular medication, check the warning label or ask your pharmacist or doctor.

158. When roads are slippery, you should

- ✓ make turns as carefully as possible.

On slippery roads, avoid sudden moves that could lead to a skid. Drive slowly and smoothly. Accelerate, brake, and turn gradually and gently.

159. When driving on grades, which of these is the best choice for a safe speed?

- ✓ Based on your vehicle and its cargo, select a speed that is safe within the posted limit.

When driving on a downgrade, select a speed that is appropriate for the total weight of your vehicle and its cargo, the length and steepness of the grade, the road conditions, and the weather. Never exceed the posted speed limit or the speed indicated on any posted "Maximum Safe Speed" sign.

160. Why are placards used?

- ✓ To communicate the risk.

Hazardous materials placards are four regulated signs on the outside of the vehicle that identify the hazard class of the cargo for those who need to know, such as emergency service personnel or those who load and unload cargo.

161. To safely adjust your speed to current driving conditions, what should you look for ahead?

- ✓ Traffic and road conditions

Driving too fast is a major cause of fatal crashes. You must adjust your speed to current driving conditions such as visibility, traction, traffic, curves, upgrades, and downgrades.

162. What should you do when approaching a hazard in a work zone?

- ✓ Use your four-way flashers or brake lights to warn others.

When approaching a hazard in a work zone, warn the drivers behind you by flashing your brake lights or (if state law allows it) turning on your four-way flashers.

163. If your brakes get wet on a rainy day, what can result?

- ✓ Reduced braking power.

Brakes use friction to convert the kinetic energy of your moving vehicle into heat. If the brakes get wet, the brake shoes or brake pads may produce less friction. The brakes will grab, apply unevenly, or become weak. When you try to brake, your braking distance may increase, your vehicle may pull to one side, or the wheels may lock. On a wet road, locked wheels can cause a skid (or even a jackknife if you're pulling a trailer).

164. What is countersteering?

- ✓ Turning the wheel back in the other direction after steering to avoid a hazard.

In a quick turning maneuver such as recovering from a drive-wheel braking skid or moving from the shoulder onto the roadway at a higher speed, your vehicle will tend to overshoot and keep turning in the same direction more than you want it to. Be ready to counteract this by turning your steering wheel in the opposite direction. This is known as countersteering.

165. What are two ways to know when to upshift?

- ✓ Use engine speed (rpm) and road speed (mph).

Before driving your vehicle, check the driver's manual to find out the recommended operating rpm range. As you're driving, keep your eye on your tachometer as your vehicle increases speed. Shift up when engine rpm gets to the top of the recommended range. Another way to know when to shift up is to learn in advance which gears are suited to which speeds. As you drive, watch your speedometer and shift accordingly.

166. When driving in an area with few streetlights on a clear night, if you cannot see well with your headlights, you should

- ✓ use your high beams when legal and keep your interior lights off.

If the lights from your instrument panel or other interior lights are too bright, it will take time for your eyes to adjust to the darkness outside. Help your eyes adjust to the outside darkness by dimming your instrument panel lights as much as possible and turning off all other interior lights. Use your high-beam headlights whenever possible. However, dim your headlights whenever you're within 500 feet of an oncoming vehicle or within 500 feet of a vehicle you are following.

167. Blocking the cargo to keep it from shifting must be done

- ✓ at the front, back, and/or sides of a piece of cargo.

Blocking and bracing can prevent cargo from shifting. Use blocking and bracing to keep cargo from shifting in whichever directions it might move. Blocking fits snugly against cargo; bracing runs from the upper part of the cargo to the floor or walls of the cargo compartment.

168. When driving through roadway work zones, you should

- ✓ watch for sharp pavement drop-offs.

Dramatic pavement drop-offs are common in work zones, but they can also occur elsewhere. If you stray too near the edge of a drop-off, your vehicle may tilt toward that side of the road, and the top of your vehicle may hit a roadside object. If your vehicle crosses the drop-off, steering will be adversely affected.

169. What things should you check during a trip?

- ✓ Watch gauges and mirrors and use your senses to check for problems: LOOK, LISTEN, and SMELL.

During your trip, you should be watching a number of things, such as your mirrors, gauges, instruments, lights, tires, and cargo. Use several of your senses – sight, hearing, smell, and feel – to detect possible trouble.

170. While driving, you should use your mirrors to check

- ✓ where the rear of your vehicle is while you make turns and the condition of the tires and cargo.

Before driving your vehicle, adjust your mirrors to show parts of your vehicle as well as what's around your vehicle. During your trip, you can use your mirrors to keep an eye on your tires and open cargo if any. When you turn, check your mirrors to make sure that the rear of your vehicle isn't hitting anything. If you're pulling a trailer, use your mirrors to keep an eye on it. If it starts to jackknife, you'll be able to spot it in your mirrors.

171. What is the most important reason for being alert to hazards?

- ✓ You will have time to plan your escape if the hazard becomes an emergency.

The National Safety Council defines defensive driving as "driving to save lives, time, and money, in spite of the conditions around you and the actions of others." Defensive driving is about anticipating potentially dangerous situations in advance, including driving conditions and mistakes made by others, and planning how to deal with those situations. To be a defensive driver, you must constantly scan for hazards all around your vehicle. When you spot a hazard, think about the emergencies that might develop from it and formulate plans to deal with them.