PRACTICE EXAM 7: HAZMAT & TANKER SIMULATION (50 QUESTIONS)

HAZMAT SECTION (Questions 1–30)

1. A driver is transporting 1,200 pounds of Division 5.1 Oxidizer on a flatbed trailer. At a second pickup, the driver is asked to load 900 pounds of Class 3 Flammable Liquid onto the same trailer. Before accepting the second load, what must the driver verify?

A. That the combined weight does not exceed the trailer's rated cargo capacity as shown on the trailer's VIN plate

B. That both materials are assigned to the same packing group so they can share the same securement method on the flatbed

C. That the driver's CDL was issued in the same state as the shipper's business license for the flammable liquid load

D. That the oxidizer and flammable liquid are compatible for coloading and that proper segregation can be maintained on the trailer

2. A driver reviewing a shipping paper sees the following entry: "Corrosive liquid, n.o.s., 8, UN1760, PG II, 1,800 lbs." The entry does not include a technical name in parentheses after the n.o.s. proper shipping name. Is this entry compliant?

A. Yes, because the technical name is only required for materials classified as Poison Inhalation Hazard, not for corrosive liquids

B. No, when an n.o.s. proper shipping name is used, the technical name of the specific material must appear in parentheses immediately following the shipping name

C. Yes, because the identification number UN1760 already provides sufficient identification and eliminates the need for a technical name

D. No, but only if the corrosive liquid is being transported across international borders — domestic shipments are exempt from this requirement

3. A driver transporting Class 8 Corrosive liquid in drums notices during an enroute inspection that one drum has tipped onto its side. The closure is facing sideways. No leak is visible. What concern should the driver have about this orientation?

A. No concern is necessary because Class 8 drums are designed and tested to maintain their seal in any orientation during transport

B. The drum's label is no longer visible from the standard viewing angle, which constitutes a labeling violation during a roadside inspection

C. The corrosive liquid is now pressing against the closure from the inside, which could cause the seal to fail and the drum to begin leaking

D. The tipped drum has reduced the total weight on the trailer's rear axle, creating an axle weight imbalance that must be corrected

4. Under 49 CFR Part 172, what is the required format for the shipper's certification on hazardous materials shipping papers?

A. A statement certifying that the materials are properly classified, described, packaged, marked, labeled, and in proper condition for transport, followed by the shipper's signature

B. A notarized affidavit signed by the shipper's legal counsel confirming that all applicable federal and state regulations have been reviewed

C. A digital certificate with a unique tracking number issued by the FMCSA for each individual hazardous materials shipment

D. A verbal confirmation recorded on the driver's dashcam at the time of pickup, with the shipper stating compliance on camera

5. A tank vehicle carrying 8,500 gallons of gasoline is parked at a fuel terminal. A severe thunderstorm with frequent lightning is approaching the area. Loading operations have not yet begun. What should the driver do?

A. Begin loading immediately to complete the operation before the storm arrives and then depart the terminal ahead of the weather

B. Proceed with loading but park the vehicle under a metal canopy to protect the manhole openings from direct lightning strikes

C. Begin loading at a reduced flow rate because lower flow rates generate less static electricity during electrical storms

D. Suspend all loading operations until the lightning threat has passed, because lightning can ignite flammable vapors present during loading

6. A driver is hauling a load of Division 2.2 NonFlammable Gas cylinders totaling 1,500 pounds. During a delivery, the driver drops off 600 pounds of cylinders. The remaining load is 900 pounds. What must the driver do regarding placards?

A. Remove the NONFLAMMABLE GAS placards because the remaining 900 pounds is now below the 1,001pound Table 2 threshold

B. Leave the placards in place because once applied, placards must remain for the duration of the trip regardless of quantity changes

C. Replace the NONFLAMMABLE GAS placards with DANGEROUS placards because the load has changed from its original configuration

D. Add an additional placard reading "PARTIAL LOAD" below each existing NONFLAMMABLE GAS placard to indicate the reduced quantity

7. Which of the following correctly identifies all three parties in the hazardous materials transportation chain and their primary regulatory roles?

A. The inspector classifies and packages; the driver loads and labels; the carrier prepares shipping papers and applies placards

B. The driver classifies the material; the shipper transports it; the carrier labels and placards the vehicle at the destination

C. The shipper classifies, packages, marks, and labels; the carrier ensures proper placarding and driver qualification; the driver verifies and transports

D. The carrier classifies and packages; the shipper transports and delivers; the driver provides emergency response at the scene

8. A driver is transporting hazardous materials when the vehicle's check engine light illuminates on the dashboard. The vehicle appears to be running normally otherwise. Should the driver pull over immediately?

A. Yes, because any dashboard warning light on a HazMat vehicle requires an immediate roadside stop and full vehicle inspection

B. No immediate stop is required for a check engine light alone, but the driver should monitor vehicle performance, complete the trip safely, and report the issue to the carrier for maintenance evaluation

C. Yes, because the check engine light indicates imminent engine failure that could cause a loss of vehicle control within minutes

D. No, because check engine lights are informational only and have no relationship to the safe transport of hazardous materials

9. A driver at a truck stop notices that another parked truck is displaying POISON GAS placards and appears to have a small vapor cloud forming near the rear valve assembly. No driver is visible in or around the vehicle. What should the driver do?

A. Approach the vehicle to read the shipping papers through the driver's window so the specific material can be identified

B. Attempt to close the rear valve assembly to stop the vapor release before it grows larger and threatens other vehicles

C. Ignore the situation because it is not the driver's vehicle or responsibility and the other driver will handle it upon returning

D. Move away from the area upwind, warn others to stay back, and call 911 to report a possible hazardous materials release

10. A driver is assigned to transport a load of hazardous materials. The carrier provides the driver with a set of placards and tells the driver to apply them to the trailer. The driver has never seen this particular placard design before and is unsure whether it is correct for the material listed on the shipping papers. What should the driver do?

A. Verify the placard against the shipping papers and the Hazardous Materials Table to confirm it matches the hazard class of the material being transported

B. Apply the placard as instructed by the carrier because the carrier is solely responsible for selecting the correct placard type

C. Refuse to transport the load because any uncertainty about placarding automatically disqualifies the driver from hauling the shipment

D. Apply the carrier's placard to three sides and a DANGEROUS placard to the fourth side as a safety precaution for unknown materials

11. A shipping paper lists a material as "Gasoline, 3, UN1203, PG II, 8,500 gal." The entry also shows "Marine Pollutant" in the description. What additional responsibility does the marine pollutant designation create for the driver?

A. The driver must follow a designated route that avoids all bridges over navigable waterways to prevent contamination in case of an accident

B. The driver should be aware that a release of this material near waterways requires additional environmental response considerations and may trigger specific reporting requirements

C. The driver must obtain a separate marine transport permit from the Coast Guard before hauling the material on any highway within 10 miles of a coast

D. The driver must carry a marine spill containment kit in addition to the standard fire extinguisher required on all placarded vehicles

12. A driver is transporting a mixed load of hazardous materials. One material is identified on the shipping papers as having a subsidiary hazard of "8" (Corrosive) in addition to its primary hazard class. How should this subsidiary hazard affect the driver's predeparture placard check?

A. The subsidiary hazard has no effect on placarding — only the primary hazard class determines which placard is displayed

B. The subsidiary hazard requires the driver to carry a CORROSIVE placard in the cab as a spare but not display it on the vehicle

C. The driver must verify that both the primary hazard placard and the CORROSIVE subsidiary hazard placard are displayed on all four sides

D. The subsidiary hazard requires the driver to add the word "CORROSIVE" in handwritten text below each primary hazard placard

13. A driver is preparing to load hazardous materials at a facility where the loading dock is on a slight incline. Before loading begins, what must the driver do to secure the vehicle?

A. Set the parking brake and chock the wheels to prevent the vehicle from rolling or shifting during the loading operation

B. Leave the engine running in gear with the transmission engaged to hold the vehicle in position against the dock bumpers

C. Ask the dock workers to stand behind the trailer tires as human wheel chocks during the loading process

D. Attach the trailer to the dock with a chain and padlock to prevent separation during loading operations

14. Which agency maintains the Training Provider Registry (TPR) that lists approved providers for the EntryLevel Driver Training required for firsttime HazMat endorsement applicants?

A. The Environmental Protection Agency through its chemical safety division and regional training coordination offices

B. The Transportation Security Administration as part of its HazMat endorsement security screening program

C. Each state's Department of Motor Vehicles, which independently approves training providers for its own jurisdiction

D. The Federal Motor Carrier Safety Administration, which maintains the national registry of approved ELDT training providers

15. A driver transporting Division 1.1 Explosives is involved in a minor fenderbender in a parking lot. There is no damage to the cargo or the trailer — only a small dent on the tractor's rear bumper. No one is injured and no product is released. Must this incident be reported to the National Response Center?

A. Yes, because all accidents involving Division 1.1 Explosives must be reported to the NRC regardless of severity or damage level

B. No, because no unintentional release of hazardous material occurred and none of the mandatory NRC reporting triggers have been met

C. Yes, because Division 1.1 materials are weaponsgrade explosives that require federal notification for any incident during transport

D. No, but the driver must file a DOT Form 5800.1 within 24 hours for any accident involving a placarded vehicle carrying explosives

16. Under the Hazardous Materials Regulations, when is a motor carrier required to have a written security plan for its hazardous materials operations?

A. All motor carriers that transport any quantity of hazardous materials must maintain a security plan regardless of material type

B. Security plans are required only for carriers that transport Division 1.1 Explosives or Division 2.3 Poison Gas in dedicated vehicles

C. A security plan is required when the carrier transports certain categories of highhazard materials, including bulk quantities, select agents, and highway routecontrolled quantities of radioactive materials

D. Security plans are voluntary bestpractice documents recommended by the FMCSA but not mandated by any federal regulation

17. A driver's shipping papers show a hazardous material with the proper shipping name "Flammable liquid, toxic, n.o.s. (ethanol, methyl isocyanate), 3, UN1992, PG I." The material is classified as Class 3 with PG I. What does the Packing Group I designation tell the driver about this particular flammable liquid?

A. It represents the greatest degree of danger within Class 3, meaning the liquid has a very low boiling point and produces flammable vapors extremely rapidly

B. It indicates the material is the least hazardous version of Class 3 and qualifies for reduced packaging and handling requirements

C. It means the material is a foodgrade flammable liquid approved for transport in tanks that also carry consumable products

D. It signifies that the material was manufactured in the first quarter of the calendar year and requires annual recertification testing

18. A driver discovers during a pretrip inspection that a package of hazardous material has a label showing a trefoil (radiation) symbol on a yellow and white diamond. The shipping papers confirm the material is Class 7. What additional separation requirement applies to this material compared to most other hazard classes?

A. The material must be loaded in a refrigerated compartment maintained at or below 40°F to prevent radiation levels from increasing

B. The material must be loaded at the geometric center of the trailer to equalize radiation exposure on both sides of the vehicle

C. The material must be covered with at least two layers of leadlined blankets to shield nearby cargo from radiation exposure

D. The packages must be separated from the driver's cab and any occupied space by distances determined by the total transport index

19. A driver has been transporting hazardous materials for several hours and begins to feel dizzy, nauseated, and develops a headache. The driver suspects possible exposure to a hazardous material. What is the most appropriate immediate action?

A. Open the cab windows and continue driving to the nearest hospital emergency room for a professional medical evaluation

B. Pull over, take an aspirin and a nap in the sleeper berth, and resume driving when the symptoms subside

C. Pull over safely, exit the vehicle, move to fresh air upwind of the vehicle, and seek medical attention — informing responders of the specific materials being transported

D. Radio the dispatcher and request permission to take a 30minute rest break at the next available truck stop to recover

20. A vehicle is carrying 600 pounds of Class 3 Flammable Liquid and 600 pounds of Division 4.1 Flammable Solid. Both are Table 2 materials. No other hazardous materials are on the vehicle. What is the correct placarding decision?

A. Both FLAMMABLE and FLAMMABLE SOLID placards are required because the total hazardous materials weight exceeds 1,001 pounds

B. DANGEROUS placards may be used because two different Table 2 classes are present and the combined total of 1,200 pounds exceeds 1,001 pounds

C. No placards are required because neither individual hazard class reaches the 1,001pound threshold independently

D. Only the FLAMMABLE placard is required because Class 3 takes automatic priority over Division 4.1 in all mixedload situations

21. A driver picks up a load at a chemical plant. The shipping papers are complete, the packages are properly marked and labeled, and the shipper has applied the correct placards. However, the driver notices that the placards are mounted using magnetic holders, and one of the four magnets appears weak — the placard is tilted at an angle and could fall off in highway wind. What should the driver do?

A. Accept the shipment but ask the shipper for duct tape to reinforce the weak magnet before departing the facility

B. Refuse the entire shipment and return to the carrier's terminal because magnetic placard holders are prohibited by federal regulation

C. Correct the weak mounting before departing — ensure all four placards are securely attached and will remain in place throughout the trip

D. Leave the weak placard asis because the three remaining properly mounted placards provide adequate hazard communication

22. A driver notices that a Class 3 Flammable Liquid drum in the trailer has a label that appears to be a Class 8 Corrosive label. The shipping papers identify the material as Class 3 only, with no subsidiary hazard. What does this discrepancy suggest?

A. The wrong label may have been applied to the package by the shipper, and the driver should resolve the discrepancy before transporting the shipment

B. The package contains two different materials — one flammable and one corrosive — that have been improperly combined in a single container

C. The corrosive label is a remnant from a previous shipment and should be peeled off by the driver before loading the drum

D. The shipping papers are incorrect, and the driver should reclassify the material as Class 8 based on the physical label on the package

23. A carrier's safety manager instructs a driver to transport a placarded load of hazardous materials through a tunnel that is posted with signs prohibiting hazardous materials vehicles. The safety manager states that the prohibition is outdated and no longer enforced. What should the driver do?

A. Follow the safety manager's instructions because the carrier's management has final authority over routing decisions for company vehicles

B. Proceed through the tunnel but document the safety manager's instruction in writing to protect against personal liability

C. Contact the FMCSA to verify whether the tunnel prohibition is currently enforced before making a routing decision

D. Refuse to drive through the tunnel — posted HazMat restrictions must be obeyed regardless of instructions from the carrier

24. A driver is transporting 10,000 pounds of ammonium nitrate (Division 5.1 Oxidizer) in a dry van trailer. The shipping papers correctly identify the material. During a fuel stop, a fellow driver asks what the yellow OXIDIZER placards mean. The driver should understand that the placards communicate which key message to observers?

A. The vehicle is carrying materials that spontaneously combust when exposed to atmospheric moisture above 60 percent humidity

B. The vehicle is carrying materials that supply oxygen and can dramatically intensify fires involving other combustible materials

C. The vehicle is carrying materials that emit toxic fumes requiring respiratory protection within a 500foot radius

D. The vehicle is carrying unstable materials that can detonate without warning if subjected to normal road vibration during transport

25. A driver transporting hazardous materials discovers during a stop that one of the four placards has rotated inside its holder and is now upside down — the diamond shape is still visible, but the hazard class number and text are inverted. Is this compliant?

A. Yes, because the diamond shape is the universally recognized hazard indicator regardless of text orientation

B. Yes, as long as the colors and symbol are still identifiable from a distance of at least 50 feet

C. No, placards must be displayed in proper orientation with text and numbers readable — an inverted placard must be corrected

D. No, but only if the inverted placard is on the front or rear of the vehicle — side placards may be displayed in any orientation

26. A hazardous material is described on shipping papers with the notation "Poison Inhalation Hazard, Zone B" following the basic description. What does this zone designation communicate about the material's toxicity?

A. Zone B indicates the material is toxic only through direct skin contact and presents no inhalation hazard below 100°F

B. Zone B indicates a moderate level of inhalation toxicity — less acutely lethal than Zone A but still presenting serious respiratory danger

C. Zone B indicates the material requires storage in a climatecontrolled zone maintained between 60°F and 80°F during transport

D. Zone B specifies the geographic region of the country where the material may legally be transported — Zone B covers the central United States

27. A driver is reviewing the shipping papers for a multistop delivery route. The papers list seven different hazardous materials, each going to a different customer. At the third delivery, the driver will drop off the only Table 1 material on the truck — a small quantity of Division 2.3 Poison Gas. After that delivery, what placard change is required?

A. All placards must be removed and reconfigured from scratch because any change in Table 1 material status requires a complete placard reset

B. The POISON GAS placard must be removed after the Division 2.3 material is fully offloaded, while placards for remaining materials must be evaluated against their respective thresholds

C. No placard changes are permitted during a multistop route — all placards applied at the origin must remain until the truck returns to the terminal

D. The POISON GAS placard must remain for the duration of the trip because the vehicle previously carried a Table 1 material and residue may be present

28. Under the Hazardous Materials Regulations, what is the maximum distance allowed between primary and subsidiary hazard labels on the same package when the package size permits proper placement?

A. Within six inches of each other, placed on the same surface or adjacent surfaces of the package

B. On opposite sides of the package to ensure visibility from both approach directions during handling

C. No maximum distance is specified — labels may be placed on any surface of the package at any distance from each other

D. The subsidiary label must be placed directly on top of the primary label as an overlay to save surface space on small packages

29. A driver is transporting a placarded load and encounters road construction that has reduced the highway to a single lane with a gravel surface for approximately 500 feet. The gravel is loose and uneven. What specific hazard does this road condition create for a HazMat vehicle?

A. The gravel surface will damage the vehicle's placards, making them illegible and triggering a placarding violation

B. The uneven gravel surface can cause cargo to shift, bounce, or fall, potentially damaging hazardous materials packages and causing a release

C. Gravel roads generate static electricity through tire friction that can ignite flammable vapors leaking from the cargo area

D. The speed reduction required for the gravel section will cause the engine to overheat, potentially creating an ignition source near the cargo

30. A driver is assigned to pick up a load described by the dispatcher as "cleaning supplies for a hospital." Upon arrival, the driver discovers that the shipment consists of large containers of industrialstrength sodium hypochlorite solution labeled as a Class 8 Corrosive and an oxidizer. The total weight is 3,000 pounds. What does this scenario illustrate about the driver's responsibilities?

A. The driver has no additional obligations because cleaning supplies are consumer products exempt from all HazMat regulations

B. The driver should verify with the dispatcher whether a HazMat endorsement is actually required for hospital cleaning products

C. The driver may transport the materials without an endorsement as long as the hospital provides a letter waiving the HazMat requirement

D. Regardless of the dispatcher's description, the driver must verify the actual materials against the shipping papers and ensure full compliance with HazMat placarding, documentation, and endorsement requirements

TANKER SECTION (Questions 31–50)

31. A tank vehicle driver arrives at a delivery site and discovers that the customer's receiving tank fill connection is located directly beneath a large oak tree with lowhanging branches approximately 6 feet above the fill pipe. The driver needs to extend a product hose overhead from the cargo tank's discharge point to the fill connection. What hazard should the driver consider?

A. Lowhanging branches can snag, puncture, or abrade the product hose during connection and disconnection, and falling branches or debris could damage fittings — the driver should assess whether the hose can be safely routed without contact

B. Tree roots may have damaged the customer's underground piping, making the fill connection unreliable and prone to leaking during delivery

C. The tree's leaves will contaminate the product if any fall into the fill pipe opening during the delivery process

D. Oak trees generate a natural static charge through their root systems that can interfere with the vehicle's grounding cable effectiveness

32. A tank vehicle carrying a full load of liquid is traveling on a twolane highway at 50 mph. A car in the oncoming lane suddenly crosses the center line heading directly toward the tank vehicle. The driver has approximately two seconds to react. What is the primary concern unique to tank vehicles that affects the driver's evasive options?

A. Tank vehicles cannot exceed 50 mph, so the driver has no ability to accelerate out of the path of the oncoming vehicle

B. The tank's cylindrical shape creates a blind spot directly ahead that prevents the driver from seeing the oncoming vehicle until it is too close

C. The vehicle's engine is typically underpowered for evasive acceleration, making any attempt to speed past the oncoming car futile

D. A hard swerve at 50 mph carries extreme rollover risk due to the high center of gravity and lateral liquid surge, severely limiting the driver's ability to change direction safely

33. A driver operating a loaded tank vehicle on a mountainous highway encounters a sign reading "8% DOWNGRADE — NEXT 4 MILES — TRUCKS USE LOW GEAR." The driver is currently in a gear that maintains 45 mph on the level road. What should the driver do before the downgrade begins?

A. Maintain the current gear because 45 mph is within the posted speed limit and the brakes can handle any speed increase on the grade

B. Shift to a lower gear that will hold the vehicle at a safe speed through engine braking alone, before the descent begins and speed starts building

C. Shift to neutral and coast down the grade, applying the brakes only when speed exceeds the posted limit by more than 5 mph

D. Apply the parking brake in addition to the service brakes to double the braking force available for the fourmile descent

34. A tank vehicle is equipped with a multicompartment tank. Compartment 1 holds 2,000 gallons of regular gasoline. Compartment 2 is empty. Compartment 3 holds 2,500 gallons of diesel fuel. What is the most significant handling concern created by this loading configuration?

A. The gasoline and diesel will mix through molecular diffusion through the bulkhead walls during transport, contaminating both products

B. The empty center compartment acts as an air brake that slows the vehicle during acceleration, reducing fuel efficiency

C. The empty center compartment between two loaded compartments creates a weight distribution gap in the middle of the trailer, potentially causing uneven axle loading and unpredictable handling

D. The diesel fuel in compartment 3 will overheat because the empty compartment 2 prevents thermal transfer from the enginecooled compartment 1

35. A tanker driver completes a fuel delivery and needs to drive the empty tank vehicle to the next loading terminal. The vehicle still displays FLAMMABLE placards. Must the driver remove the placards for the empty return trip?

A. Not necessarily — if the tank has not been cleaned and purged and contains flammable residue and vapors, the placards must remain until the tank is properly cleaned

B. Yes, placards must always be removed immediately after the last drop of product is unloaded from any cargo tank

C. No, placards are permanently assigned to cargo tanks based on the tank's specification and may never be removed

D. Yes, but only if the return trip crosses a state line — intrastate emptytank trips are exempt from placarding requirements

36. A driver is making a tight backing maneuver at a delivery site with a loaded smooth bore tank vehicle. The tank is approximately 70 percent full. What surge effect should the driver anticipate during this lowspeed backing operation?

A. No surge will occur because liquid surge requires highway speeds of at least 25 mph to generate measurable force

B. The liquid will surge forward and backward with each application and release of the brakes during the backing maneuver, and the driver should use gentle, gradual brake inputs

C. The liquid will surge only laterally during backing because the vehicle's reverse gear reverses the direction of surge forces

D. Surge during backing is eliminated by the vehicle's transmission, which locks the drivetrain in reverse and prevents any cargo movement

37. A cargo tank is being loaded with a product the driver has not hauled before. The loading facility operator tells the driver that this particular product has a very high rate of thermal expansion — nearly twice that of gasoline. How should this information affect the loading decision?

A. The driver should request that the loading facility cool the product to its lowest safe handling temperature before loading to minimize expansion

B. The driver should load the tank to the same fill level as a normal gasoline load because the tank's pressure relief devices will handle any excess expansion

C. The information has no practical effect because all cargo tanks are designed with sufficient structural margin to handle any liquid's expansion rate

D. The driver should ensure that additional outage space beyond the normal amount is left in the tank to accommodate the greater thermal expansion during transport

38. A loaded tank vehicle approaches a railroad grade crossing on a rural road. There are no warning signals, gates, or lights — only a crossbuck sign. Must the driver stop?

A. No, crossbuckonly crossings do not require mandatory stops for commercial vehicles — only crossings with active warning devices require stops

B. No, the stop requirement applies only to vehicles carrying Division 1 Explosives or Division 2.3 Poison Gas at railroad crossings

C. Yes, drivers of placarded HazMat vehicles must stop at all railroad grade crossings regardless of the type of warning devices present

D. Yes, but only if the tank vehicle is carrying a flammable or combustible liquid — nonhazardous tank loads do not require a railroad crossing stop

39. During a cargo tank pretrip inspection, the driver checks the emergency shutoff system and discovers that one of the two remote shutoff control handles operates correctly, but the second handle at the unloading position is jammed and will not move. What is the proper course of action?

A. Report the jammed handle to the carrier and have it repaired before operating the vehicle, because both remote shutoff positions must be functional

B. Proceed with the trip because one working remote shutoff handle provides adequate emergency shutoff capability

C. Remove the jammed handle and operate the internal valve manually from underneath the tank during loading and unloading

D. Tape a warning sign over the jammed handle reading "OUT OF SERVICE" and proceed with the trip using the working handle only

40. What is the purpose of the rollover protection devices installed on many modern cargo tanks, such as rolloveractuated shutoff valves and reinforced manhole covers?

A. They prevent the tank vehicle from rolling over by automatically deploying stabilizing outriggers when the vehicle begins to lean

B. They reduce the total weight of the cargo tank by replacing heavier conventional components with lighter rolloverresistant materials

C. They minimize product release during a rollover by automatically closing valves and providing stronger seals on openings that bear the weight of the liquid in an inverted position

D. They alert the driver to an impending rollover through audible alarms and dashboard warning lights that activate when the vehicle's lean angle exceeds 15 degrees

41. A tank vehicle driver is operating on a straight, flat interstate highway on a clear, dry day. The speed limit is 65 mph. The vehicle is a fully loaded baffled tank carrying a nonhazardous liquid. At what following distance should the driver operate behind the vehicle ahead?

A. The same following distance as a passenger car, because the dry conditions and straight road eliminate any additional risk

B. The standard commercial vehicle following distance with no adjustment, because the baffled tank eliminates surge concerns

C. Half the standard commercial vehicle following distance, because the full load produces minimal surge compared to a partial load

D. At least one additional second beyond the standard commercial vehicle following distance to account for the surgerelated stopping distance extension unique to tank vehicles

42. A driver operating a tank vehicle at highway speed notices the steering wheel vibrating rhythmically. The vibration increases as speed increases. What is the most likely cause, and what should the driver do?

A. The liquid cargo is resonating at a frequency that matches the vehicle's natural harmonic, and the driver should speed up or slow down to break the resonance

B. A front tire may be out of balance, have a flat spot, or have developed tread separation — the driver should reduce speed and safely exit the highway to inspect the tires

C. The tank's internal baffles have come loose and are vibrating against the tank shell — the driver should continue to the next exit and call for a tank inspection

D. The steering gearbox is overheating due to the additional weight of the loaded tank — the driver should stop and allow the gearbox to cool for 30 minutes

43. A driver has just loaded a DOT 406 cargo tank with 8,000 gallons of gasoline at a petroleum terminal. Before departing, the driver must verify the placard and identification number display. What identification number should be displayed on the vehicle?

A. The DOT specification number of the tank (DOT 406) on orange panels on each side and each end

B. The carrier's USDOT number and MC number on the doors of the tractor cab

C. The fourdigit identification number for gasoline (UN1203) on each side and each end of the cargo tank, either on the placard or on adjacent orange panels

D. The terminal's facility identification number as assigned by the state environmental protection agency

44. A tank vehicle driver is delivering propane to a residential customer using an MC 331 bobtail delivery truck. During the transfer, the driver notices frost forming on the outside of the tank near the liquid service valve. What does this frost indicate?

A. Liquid propane is present at or near that point inside the tank — the extremely cold liquefied gas chills the tank wall enough to condense and freeze atmospheric moisture on the exterior

B. The tank's insulation has failed at that location, allowing outside heat to enter the tank and accelerating the product's evaporation rate

C. The frost indicates that the propane has reached its freezing point and is solidifying inside the tank, which will block the service valve

D. A corrosive chemical reaction between the propane and the tank's steel shell is generating heat that paradoxically causes frost through a thermodynamic inversion

45. A loaded tank vehicle is traveling at 55 mph when the driver sees a vehicle stopped in the travel lane approximately 500 feet ahead. The driver immediately begins braking. In a conventional dry van at the same speed and weight, the stopping distance would be approximately 300 feet. Approximately how much additional distance might the tank vehicle require due to liquid surge?

A. No additional distance — modern ABS systems completely compensate for liquid surge effects during emergency braking

B. Approximately 12 feet additional, because liquid surge generates only negligible force at highway speeds

C. Approximately 5,000 feet additional, because liquid surge multiplies stopping distance by a factor of 10 or more

D. Approximately 60120 feet additional, representing a 2040 percent increase in stopping distance from the surge force pushing the vehicle forward during braking

46. A tank vehicle driver parks a loaded cargo tank at a truck stop for a mandatory rest break. The parking surface is a paved lot with a very slight downhill slope toward the truck stop building. What precaution is most critical?

A. Set the parking brake firmly and chock the wheels, because the heavy loaded tank on even a slight slope can overcome the parking brake and creep toward the building

B. Leave the engine running in gear to hold the vehicle in position against the downhill slope during the rest break

C. Park with the front of the vehicle facing downhill so that gravity helps hold the vehicle against the trailer brakes

D. No special precaution is needed because paved truck stop lots are level by design and slight slopes are too minor to affect a loaded vehicle

47. A driver operating an empty tank vehicle (previously carried water, now cleaned) notices that the vehicle handles very differently from when it was loaded. The vehicle feels "bouncy" and less stable in crosswinds. Why?

A. The cleaning chemicals used to wash the tank interior have weakened the vehicle's suspension springs and shock absorbers

B. The vehicle's tires have been inflated to a higher pressure during cleaning operations and need to be adjusted back to normal

C. The empty tank has a very high center of gravity relative to its weight, and the large surface area acts as a sail in crosswinds — reduced weight means less tire traction to resist wind forces

D. The vehicle's ABS system automatically deactivates when the tank is empty, reducing the driver's ability to maintain control in crosswinds

48. A tank vehicle is being loaded with a product through a bottomloading connection rather than through the top manholes. What is the primary safety advantage of bottom loading compared to top loading for flammable liquids?

A. Bottom loading allows the driver to monitor the liquid level more accurately through sight glasses mounted at the bottom of the tank

B. Bottom loading reduces vapor emissions and static electricity generation because the product enters below the liquid surface from the start, eliminating splash loading

C. Bottom loading is faster than top loading because the product flows downhill from the facility's storage tanks into the cargo tank

D. Bottom loading prevents the product from contacting the tank's pressure relief devices, which are located at the top of the tank

49. A driver operating a loaded tank vehicle during a nighttime trip on a rural highway encounters a section of road with no streetlights and a sharp, poorly banked curve. The curve has no advisory speed sign. What approach should the driver take?

A. Maintain the posted speed limit because the absence of an advisory speed sign means the curve is safe for all vehicles at the limit

B. Flash the high beams repeatedly while entering the curve to improve visibility of the road surface and any obstacles ahead

C. Accelerate before the curve to complete the turn quickly and reduce the time spent on the poorly lit section of road

D. Reduce speed significantly before the curve, using extra caution because the lack of an advisory sign means the curve's severity is unknown and poor banking increases rollover risk

50. A tank vehicle driver is conducting a posttrip inspection after completing all deliveries. The tank is empty and has been drained. The driver notices a thin film of liquid residue on the exterior of the tank below one of the manhole covers. The residue appears to be the same product that was hauled during the trip. What does this suggest?

A. The manhole cover gasket may have a leak that allowed small amounts of product to seep past the seal during transport — the driver should document the finding and report it to the carrier for maintenance evaluation

B. The residue is condensation from atmospheric humidity that has mixed with road dust, creating the appearance of a product leak

C. The residue was deposited during loading operations at the terminal and has no relationship to the manhole cover's seal integrity

D. The residue indicates that the tank's internal coating has failed, allowing product to permeate through the tank shell wall

Practice Exam 7: Answer Key and Explanations

1. D — Oxidizers (Division 5.1) and flammable liquids (Class 3) are incompatible materials that can produce extremely intense fires if containers fail and the materials come into contact. Before accepting the second load, the driver must verify that the two materials can be legally coloaded and that proper segregation distances or barriers can be maintained on the flatbed trailer throughout transport.

2. B — When an n.o.s. (not otherwise specified) proper shipping name is used, the technical name of the specific hazardous material must appear in parentheses immediately following the proper shipping name on the shipping papers. This requirement ensures precise identification for emergency response, even when the broad n.o.s. category covers many different specific substances. The entry is noncompliant without the technical name.

3. C — Corrosive liquid drums must be loaded upright with closures facing up. When a drum tips onto its side, the corrosive liquid presses directly against the closure seal from the inside. This sustained internal pressure on the closure — which was designed to resist downward gravitational pressure, not lateral hydraulic pressure — can cause the seal to fail and initiate a leak.

4. A — The shipper's certification must be a written statement on the shipping papers certifying that the hazardous material has been properly classified, described, packaged, marked, labeled, and is in proper condition for transportation according to applicable regulations. The certification must be followed by the shipper's signature or authorized representative's signature. This is a mandatory regulatory element.

5. D — Lightning can ignite flammable vapors that are present during loading operations, particularly when manholes are open and product is being transferred. All loading operations for flammable liquids should be suspended during electrical storms and should not resume until the lightning threat has passed. The combination of flammable vapors and electrical discharge is a welldocumented cause of terminal fires and explosions.

6. A — After delivering 600 pounds of the 1,500pound load, the remaining 900 pounds of Division 2.2 NonFlammable Gas is now below the 1,001pound Table 2 placarding threshold. The NONFLAMMABLE GAS placards must be removed because displaying placards on a vehicle that no longer meets the placarding threshold is a violation — just as failing to display required placards is a violation.

7. C — The shipper classifies the material, selects packaging, marks and labels each package, prepares shipping papers, and certifies compliance. The carrier ensures proper placarding, verifies driver qualification, and maintains a security plan. The driver verifies the shipper's work, confirms placarding, maintains shipping paper accessibility, follows driving rules, and responds to emergencies. Each party has distinct, noninterchangeable responsibilities.

8. B — A check engine light alone does not indicate an imminent safety emergency requiring an immediate roadside stop. The driver should monitor vehicle performance for any changes — loss of power, overheating, unusual sounds — and complete the trip safely if no performance degradation is observed. The issue should be reported to the carrier for maintenance evaluation at the earliest opportunity.

9. D — A vapor cloud forming near the valves of a vehicle displaying POISON GAS placards indicates a potential release of Division 2.3 toxic gas. The driver should not approach the vehicle because toxic gas exposure can incapacitate or kill within minutes. The correct response is to move away upwind, warn others to stay back, and call 911 to report the suspected hazardous materials release.

10. A — The driver has a personal responsibility to verify that the placards on the vehicle match the hazard class of the material listed on the shipping papers. The driver should crossreference the placard's color, symbol, and class number against the shipping papers and the Hazardous Materials Table. Operating with incorrect placards is a violation charged to the driver during a roadside inspection.

11. B — The marine pollutant designation indicates that the material is harmful to the aquatic environment if released. While this does not change the basic HazMat transportation requirements, a release near waterways triggers additional environmental response considerations and may require specific notifications to environmental agencies. The driver should be aware of this heightened environmental sensitivity during transport.

12. C — When a material has a subsidiary hazard listed in Column 6 of the Hazardous Materials Table, both the primary hazard placard and the subsidiary hazard placard must be displayed on all four sides of the vehicle. The subsidiary CORROSIVE placard communicates an additional danger that emergency responders need to know about when approaching the vehicle from any direction.

13. A — Before loading any hazardous material, the vehicle must be secured against movement by setting the parking brake and chocking the wheels. On an inclined loading dock, the risk of the vehicle rolling or shifting is increased. Wheel chocks provide a positive mechanical block that prevents movement regardless of brake condition, grade, or the weight changes that occur as cargo is loaded.

14. D — The Federal Motor Carrier Safety Administration maintains the Training Provider Registry (TPR), which lists all approved providers for EntryLevel Driver Training. ELDT HazMat theory training must be completed through a provider listed on the TPR, and the provider must report completion to the registry before the applicant is eligible to take the HazMat knowledge test at the DMV.

15. B — A minor fenderbender with no release of hazardous material, no injuries, and no significant property damage does not trigger NRC reporting requirements. The mandatory

NRC notification triggers include death, hospitalization, property damage exceeding $50,000, public evacuation lasting one hour or more, and road closure lasting one hour or more. A small bumper dent meets none of these criteria.

16. C — A written security plan is required for carriers that transport certain highhazard categories of materials, including any quantity of highway routecontrolled radioactive materials, bulk quantities of hazardous materials in cargo tanks or portable tanks, and select agents or toxins. Not all HazMat carriers require a security plan — the requirement is triggered by specific material categories.

17. A — Packing Group I indicates the greatest degree of danger within its hazard class. For Class 3 Flammable Liquids, PG I materials have extremely low boiling points (at or below 95°F), meaning they evaporate very rapidly at room temperature and produce large quantities of flammable vapor. This makes PG I flammable liquids significantly more dangerous than PG II or PG III materials of the same class.

18. D — Class 7 Radioactive material packages must be separated from the driver's cab and any occupied space by distances determined by the total transport index of the shipment. The transport index reflects the radiation level at one meter from the package surface. Higher transport index values require greater separation distances to limit the driver's cumulative radiation exposure during transport.

19. C — Symptoms of dizziness, nausea, and headache during HazMat transport may indicate exposure to a toxic or oxygendisplacing material. The driver should immediately pull over safely, exit the vehicle, and move to fresh air upwind. Medical attention should be sought promptly, and the driver must inform medical personnel of the specific materials being transported so appropriate treatment can be provided.

20. B — Neither the Class 3 material (600 lbs) nor the Division 4.1 material (600 lbs) individually reaches the 1,001pound Table 2 threshold. However, the combined aggregate of all Table 2 materials is 1,200 pounds, which exceeds 1,001 pounds. DANGEROUS placards may be used when two or more Table 2 classes are present and the combined total meets the threshold while no single class reaches it independently.

21. C — All four placards must be securely mounted and capable of remaining in place throughout the trip. A weakly mounted placard that could fall off during highway driving would leave the vehicle with only three placards — a violation of the fourplacard requirement. The driver should correct the mounting before departing, either by adjusting the magnetic holder or replacing it with a functional one.

22. A — A label that does not match the hazard class listed on the shipping papers indicates a discrepancy that must be resolved before transport. Either the wrong label was applied by the shipper, the shipping papers are incorrect, or the wrong material was staged for pickup. The driver should not attempt to resolve the discrepancy independently — the shipper must verify which information is correct.

23. D — Posted HazMat restrictions on tunnels, bridges, and other facilities must be obeyed regardless of verbal instructions from a carrier's management. The driver has an independent legal obligation to comply with all applicable regulations. Driving through a tunnel that

prohibits HazMat vehicles is a violation that will be charged to the driver, regardless of who instructed them to do it.

24. B — The yellow OXIDIZER placard communicates that the vehicle is carrying materials that supply oxygen and can dramatically intensify fires involving other combustible materials. An oxidizer does not necessarily burn itself, but it causes other materials that would normally burn slowly — or not at all — to ignite and burn with extreme intensity, making fires much more difficult to extinguish.

25. C — Placards must be displayed in the correct orientation with the hazard class number, text, and symbol readable in their intended position. An upsidedown placard, while still diamondshaped, presents inverted text and numbers that could confuse or delay emergency responders attempting to identify the hazard class. The driver must correct the orientation before continuing.

26. D — Poison Inhalation Hazard materials are categorized into Hazard Zones A through D based on their level of inhalation toxicity. Zone A represents the highest toxicity (most lethal at lowest concentrations), while Zone D represents the lowest. Zone B indicates a level of inhalation toxicity that is less acutely lethal than Zone A but still presents serious respiratory danger requiring immediate protective action.

27. B — After the Division 2.3 Poison Gas is completely offloaded at the third delivery, the POISON GAS placard must be removed because the Table 1 material is no longer on the vehicle. The remaining materials must then be evaluated against their respective Table 2 thresholds to determine which classspecific placards are still required for the rest of the route.

28. A — When a package requires both a primary and a subsidiary hazard label, both labels must be placed within six inches of each other on the same surface of the package or on adjacent surfaces, when package size permits. This proximity ensures that anyone viewing one label also sees the other, communicating the full range of hazards the material presents.

29. B — Loose, uneven gravel surfaces can cause packaged cargo to shift, bounce, and vibrate more severely than smooth pavement. For hazardous materials packages — particularly drums, cylinders, and boxes — this increased movement can cause packages to fall, collide with each other, or be damaged, potentially rupturing containers and releasing hazardous material. The driver should reduce speed significantly through the construction zone.

30. D — Regardless of how a shipment is described by the dispatcher, the driver must independently verify the actual materials against the shipping papers and ensure full compliance with all HazMat requirements. A vague description like "cleaning supplies" may mask materials that are regulated corrosives, oxidizers, or both. The driver's obligation is to the regulatory requirements, not to the dispatcher's informal description.

31. A — Lowhanging tree branches present a physical hazard to the product hose during connection and disconnection. Branches can snag, abrade, or puncture the hose, and falling debris could damage fittings or enter the fill pipe. The driver should assess whether the hose can be safely routed to avoid branch contact, or request an alternate fill connection location if the hazard cannot be mitigated.

32. D — A hard swerve at 50 mph in a loaded tank vehicle carries extreme rollover risk because the lateral liquid surge combined with the high center of gravity can exceed the vehicle's stability threshold almost instantaneously. This severely limits the driver's evasive options compared to a conventional vehicle. The driver must weigh the rollover risk of swerving against the collision risk of hard braking.

33. B — The driver must select a lower gear that provides adequate engine retardation before the descent begins. The correct gear should hold the vehicle at a safe speed through engine compression braking alone, without relying primarily on the service brakes. Waiting until speed builds on the downgrade makes it difficult to downshift safely, and overreliance on service brakes leads to brake fade on a fourmile, 8 percent grade.

34. C — An empty center compartment between two loaded compartments creates a weight distribution gap in the middle of the trailer. The weight is concentrated at the front and rear with nothing in the center, which can produce uneven axle loading, unpredictable handling characteristics, and potentially illegal axle weights. The loading sequence should distribute weight as evenly as possible across the tank's length.

35. A — An "empty" cargo tank that has not been cleaned and purged still contains flammable residue and vapors that present the same hazards as the original product. The FLAMMABLE placards must remain in place until the tank is sufficiently cleaned of liquid residue and purged of vapors to remove all potential fire and explosion hazard. Simply draining the tank does not eliminate the placarding requirement.

36. B — Liquid surge occurs at any speed, including the very low speeds used during backing maneuvers. Each application and release of the brakes causes the liquid to surge forward and backward within the tank. In a smooth bore tank at 70 percent capacity, the liquid has significant room to move. The driver should use gentle, gradual brake inputs to minimize the rocking effect.

37. D — A product with a thermal expansion rate nearly twice that of gasoline will expand significantly more during temperature increases encountered during transport. The standard outage calculated for gasoline may be insufficient for this product. The driver should ensure that additional outage space is left in the tank to accommodate the greater expansion without overpressurizing the tank or activating pressure relief devices.

38. C — Drivers of placarded HazMat vehicles must stop at all railroad grade crossings, regardless of the type of warning devices present — active signals, passive crossbucks, or no devices at all. The driver must stop within 50 feet but not closer than 15 feet from the nearest rail, look and listen for approaching trains, and proceed only when certain it is safe to cross.

39. A — Both remote shutoff control positions must be functional to provide the driver with emergency shutoff capability from multiple locations on the vehicle. If the unloadingposition handle is jammed, the driver cannot close the internal valves from the discharge area during an unloading emergency. The driver should report the malfunction and have it repaired before operating the vehicle.

40. C — Rollover protection devices such as rolloveractuated shutoff valves and reinforced manhole covers are designed to minimize product release if a rollover occurs — not to prevent the rollover itself. They automatically close valves and provide stronger seals on openings that

must bear the weight of the liquid when the tank is inverted or on its side, reducing environmental contamination and fire risk.

41. D — Even under ideal conditions — straight, flat, dry highway with a fully loaded baffled tank — the driver should maintain at least one additional second of following distance beyond the standard commercial vehicle following distance. This additional buffer accounts for the surgerelated stopping distance extension that is inherent to all tank vehicles, regardless of road conditions or baffle presence.

42. B — Rhythmic steering wheel vibration that increases with speed is a classic symptom of a front tire problem — an outofbalance tire, a flat spot, or tread separation. In a loaded tank vehicle, a tire failure at highway speed is especially dangerous due to the high center of gravity and the risk of losing directional control. The driver should reduce speed and safely exit the highway to inspect the tires.

43. C — For a cargo tank carrying gasoline (UN1203), the fourdigit identification number must be displayed on each side and each end of the cargo tank. This can be done on the placard itself (as an ID number placard), on orange panels adjacent to the placards, or on a white squareonpoint configuration. The identification number allows emergency responders to look up the material in the ERG.

44. A — Frost forming on the exterior of an MC 331 propane tank indicates the presence of liquid propane at or near that point inside the tank. Liquefied propane is extremely cold (approximately −44°F at atmospheric pressure), and where liquid contacts the tank wall, the wall temperature drops low enough to condense and freeze atmospheric moisture on the exterior surface. This is a normal indicator of liquid level position.

45. D — Liquid surge can add approximately 2040 percent to a tank vehicle's stopping distance compared to a comparable dry van. On a base stopping distance of 300 feet, this translates to roughly 60120 feet of additional distance caused by the liquid mass continuing to push the vehicle forward after the brakes are applied. This surge distance is why tank vehicles require significantly greater following distances.

46. A — A loaded cargo tank is extremely heavy, and even a slight downhill slope can generate enough gravitational force to overcome the parking brake over time. Chocking the wheels provides a positive mechanical block that prevents any creeping movement. The combination of the parking brake and wheel chocks ensures the vehicle remains stationary throughout the rest break.

47. C — An empty tank retains its high physical profile but loses most of its weight. The large cylindrical surface area acts as a sail in crosswinds, and the reduced weight means less tire traction is available to resist lateral wind forces. The high center of gravity relative to the low overall weight makes the empty vehicle feel unstable, bouncy, and more susceptible to crosswind gusts than when loaded.

48. B — Bottom loading introduces the product below the liquid surface from the very beginning of the loading process. This eliminates splash loading — the freefall of liquid through air that generates significant static electricity and flammable vapor. By keeping the product submerged throughout loading, bottom loading dramatically reduces both static generation and vapor emissions compared to top loading.

49. D — An unfamiliar curve with no advisory speed sign and poor banking on a dark rural highway demands maximum caution. The driver cannot assess the curve's severity until entering it, and poor banking increases rollover risk by directing gravitational force toward the outside of the turn rather than toward the inside. Significant speed reduction before the curve provides the margin of safety needed for the unknown conditions.

50. A — A thin film of product residue on the exterior of the tank below a manhole cover suggests that the gasket may have leaked a small amount of product past the seal during transport. While a minor seep may not constitute an emergency, it indicates a gasket that is deteriorating or improperly seated. The driver should document the finding and report it to the carrier for maintenance evaluation and gasket replacement.