

PRACTICE EXAM 3: HAZMAT & TANKER SIMULATION (50 QUESTIONS)

HAZMAT SECTION (Questions 1–30)

1. A driver is preparing to transport 500 pounds of Division 2.3 Poison Gas and 1,800 pounds of Class 8 Corrosive material on the same vehicle. What placards must be displayed?

- A. Only the CORROSIVE placard, because the Class 8 material exceeds 1,001 pounds and is the heavier load on the vehicle
- B. Only the POISON GAS placard, because Poison Gas is the more dangerous material and takes priority over Corrosive
- C. DANGEROUS placards on all four sides, because the vehicle is carrying materials from two different hazard classes
- D. Both POISON GAS and CORROSIVE placards on all four sides, because Division 2.3 is Table 1 and Class 8 exceeds 1,001 pounds

2. A driver reviewing shipping papers notices that one hazardous material entry is missing the packing group designation. The material is listed as "Chlorine, 2.3, UN1017." Should the driver be concerned about the missing packing group?

- A. Yes, the driver must refuse the shipment because every hazardous material entry requires a packing group designation
- B. No, because Class 2 (Gases) do not use the packing group system, so no packing group entry is required for chlorine
- C. Yes, but the driver should assign Packing Group II as a default if the shipper cannot provide the correct designation
- D. No, because the packing group is an optional entry that shippers include only for materials crossing international borders

3. During a routine enroute inspection at a rest area, a driver transporting Class 8 Corrosive liquid in drums discovers that one drum has tipped over and is leaking onto the trailer floor. The liquid is pooling near other nonhazardous freight. What is the driver's first priority?

A. Upright the fallen drum immediately to stop the leak, then clean the spilled material using paper towels from the cab

B. Continue driving to the nearest truck stop where better cleanup equipment and professional assistance are available

C. Protect personal safety by moving away from the leak without touching the material, then call the carrier and emergency services

D. Separate the nonhazardous freight from the corrosive liquid by moving the other packages to the opposite end of the trailer

4. Which section of 49 CFR contains the rules that specifically govern how drivers and carriers must handle hazardous materials during highway transportation, including loading, unloading, and driving requirements?

A. 49 CFR Part 177, which covers carriage by public highway and includes loading, segregation, and operational driving rules

B. 49 CFR Part 173, which covers shipper packaging requirements and definitions of all hazard classes and packing groups

C. 49 CFR Part 178, which covers specifications for the manufacture and testing of hazardous materials packaging containers

D. 49 CFR Part 180, which covers continuing qualification, maintenance, and periodic retesting of cargo tank motor vehicles

5. A shipper calls a driver and asks the driver to pick up a load described as "pool chemicals — calcium hypochlorite." The driver knows this is a Division 5.1 Oxidizer. Why is it important for the driver to understand the hazard class before arrival?

A. Knowing the hazard class allows the driver to negotiate a higher pay rate for hauling hazardous materials cargo

B. The hazard class determines the color of the vehicle required for transport and must be verified before dispatch

C. Understanding the class helps the driver choose which radio frequency to monitor during the trip for emergency broadcasts

D. The hazard class determines placarding, segregation, and handling requirements the driver must verify and comply with

6. A tanker carrying gasoline is parked at a delivery site. The driver needs to connect a product hose to the customer's receiving tank. Before connecting the hose, what must be established first?

A. The driver must verify that the customer's insurance policy covers accidental fuel spills on the property

B. Grounding and bonding connections must be established to prevent static electricity discharge during the transfer

C. The driver must obtain a signed delivery acceptance form from the customer authorizing the product transfer

D. The customer's fire department must be notified and a standby engine positioned within 500 feet of the delivery site

7. Under federal regulations, what is the maximum distance a driver may be from a placarded HazMat vehicle while still meeting the "attended" requirement, assuming the vehicle remains in clear, unobstructed view?

A. 100 feet from the vehicle, with the vehicle in the driver's clear and unobstructed line of sight at all times

B. 200 feet from the vehicle, provided the driver can return to the cab within 60 seconds if an emergency occurs

C. 50 feet from the vehicle, which is the standard safety buffer zone established for all commercial motor vehicles

D. 300 feet from the vehicle, as long as the driver has a radio or cellular phone for immediate communication with dispatch

8. A vehicle is loaded with packages of Division 1.4 Explosives weighing 1,500 pounds. What placard must be displayed?

A. EXPLOSIVES 1.1 placards, because all explosive divisions use the same placard regardless of the specific division number

B. No placard is required because Division 1.4 explosives are exempt from all placarding requirements at any quantity

C. EXPLOSIVES 1.4 placards on all four sides, because 1,500 pounds exceeds the 1,001 pound Table 2 threshold

D. DANGEROUS placards, because Division 1.4 is a lowhazard explosive that qualifies for the generalpurpose placard

9. A HazMat driver is involved in an incident where a single drum of Class 3 Flammable Liquid falls off the trailer and ruptures on the highway. No one is injured, the spill is small, and there is no fire. Does this incident require a written report on DOT Form 5800.1?

A. No, because the incident did not result in death, hospitalization, or property damage exceeding \$50,000

B. No, because DOT Form 5800.1 is only required for incidents involving cargo tank vehicles, not packaged freight

C. Yes, but only if the material released is a Table 1 material or a Poison Inhalation Hazard substance

D. Yes, because any unintentional release of a hazardous material during transportation requires a written report within 30 days

10. Which of the following accurately describes the difference between a "hazardous material" and a "hazardous substance" as the terms are used in transportation regulations?

A. A hazardous material is any substance listed by the EPA, while a hazardous substance is any material regulated by the DOT

B. A hazardous material is any DOTregulated material; a hazardous substance is an EPAdesignated material that triggers mandatory spill reporting when shipped at or above its reportable quantity

C. The terms are interchangeable and have identical regulatory definitions under both DOT and EPA regulations

D. A hazardous substance is more dangerous than a hazardous material and always requires Table 1 placarding at any quantity

11. A driver arrives at a delivery location for a HazMat shipment of hazardous waste. The facility name and address do not match the information on the Uniform Hazardous Waste Manifest. What should the driver do?

A. Deliver the waste anyway because minor address discrepancies are common and do not affect the legality of the delivery

B. Call the EPA regional office to request verbal authorization to deliver the waste to the alternate facility address

C. Refuse to deliver the waste at this facility and contact the carrier for instructions, because the waste may only be delivered to the facility identified on the manifest

D. Deliver the waste but cross out the original facility information on the manifest and write in the correct address

12. What do the letters "CHEMTREC" stand for, and what service does this organization provide to hazardous materials transporters and emergency responders?

A. Chemical Transportation Emergency Center — a 24hour service providing emergency response guidance and technical hazard information for chemical incidents

B. Chemical Emergency Tracking and Reporting Exchange Center — a government database that tracks all HazMat shipments in real time

C. Certified Hazardous Emergency Materials Technical Response and Evaluation Command — a military rapidresponse unit for chemical spills

D. Chemical Transport Regulatory Enforcement and Compliance — an FMCSA division that conducts unannounced roadside HazMat inspections

13. A driver's vehicle is carrying 600 pounds of Division 4.1 Flammable Solid and 600 pounds of Division 5.1 Oxidizer. Neither material is a Table 1 material. Are any placards required?

A. No placards are required because neither individual hazard class reaches the 1,001pound Table 2 threshold

B. Both FLAMMABLE SOLID and OXIDIZER placards are required because the combined weight exceeds 1,001 pounds

C. Only the OXIDIZER placard is required because oxidizers always take placarding priority over flammable solids

D. DANGEROUS placards may be used because the combined weight of 1,200 pounds exceeds 1,001 pounds, though no single class reaches that threshold

14. An emergency responder arrives at a HazMat accident and can see a placard on the vehicle displaying the number "1075" in the center of a red diamond. Using the ERG, what steps would the responder take to find the appropriate response guide?

A. Turn to the orange section and search for guide number 1075, which corresponds directly to the fourdigit placard number

B. Look up 1075 in the yellowbordered section to find the material name and the corresponding threedigit guide number, then turn to that guide in the orange section

C. Turn to the green section and search for 1075 to determine if the material requires special isolation and protective action distances

D. Call the National Response Center and provide the number 1075, then wait for them to fax the appropriate response guide

15. A driver transporting a load of Class 3 Flammable Liquid in nonbulk packages discovers during a stop that one package has a label showing a skull and crossbones symbol on a white diamond, in addition to the red Flammable Liquid label. What does the additional label indicate?

A. The package was previously used to transport a Division 6.1 material and the old label was never removed by the shipper

B. The package contains a material that has expired and is no longer safe for commercial use or consumer distribution

C. The additional label is a subsidiary hazard label indicating the material is also toxic in addition to being flammable

D. The skull and crossbones is a shipping industry symbol for "fragile — handle with care" and does not indicate a chemical hazard

16. What is the proper shipping name for gasoline as listed in the Hazardous Materials Table, and what is its fourdigit identification number?

- A. The proper shipping name is "Gasoline" and its identification number is UN1203
- B. The proper shipping name is "Petrol, unleaded" and its identification number is NA1204
- C. The proper shipping name is "Motor fuel, refined" and its identification number is UN1200
- D. The proper shipping name is "Petroleum distillate" and its identification number is NA1270

17. A driver is transporting hazardous materials and encounters a wildfire burning near both sides of the highway approximately one mile ahead. Traffic is still moving slowly through the area. What should the driver do?

- A. Follow the traffic through at reduced speed because other vehicles are safely navigating the area without stopping
- B. Stop the vehicle and wait for fire department personnel to escort the HazMat vehicle through the fire zone
- C. Increase speed to pass through the fire zone as quickly as possible, minimizing the duration of heat exposure
- D. Stop well before the fire area, do not proceed through or near the fire zone, and seek an alternate route or wait until the fire is controlled

18. A shipping paper entry reads: "Waste Acetone, 3, UN1090, PG II, 500 lbs." What does the word "Waste" before the proper shipping name indicate?

- A. The acetone has exceeded its manufacturer's recommended shelf life and must be disposed of within 72 hours of loading
- B. The material is hazardous waste being transported for disposal, treatment, or storage under RCRA regulations
- C. The acetone is a byproduct of an industrial process and is valued at less than the cost of a new container of acetone
- D. The acetone has been diluted with water to a concentration below 50 percent and no longer meets the Class 3 flash point criteria

19. During the loading of hazardous materials at a shipper's facility, who bears the primary legal responsibility for properly classifying the material, selecting the correct packaging, and applying the required marking and labeling?

A. The shipper, who must classify, package, mark, and label each package before offering it for transportation

B. The driver, who must verify classification and apply all markings and labels before accepting the shipment

C. The carrier's safety department, which must preapprove every hazardous material shipment before loading begins

D. The FMCSA regional inspector, who must physically inspect and certify each package before it can be offered for transport

20. A vehicle is carrying a hazardous material that requires the "INHALATION HAZARD" marking on packages in addition to standard marking and labeling. What characteristic of the material triggers this additional marking requirement?

A. The material produces a strong odor that may cause nausea or discomfort in persons near the vehicle during transport

B. The material generates dust particles during loading that may irritate the respiratory system of dock workers

C. The material is toxic by inhalation, meaning its vapors or dust can cause death or serious injury through breathing exposure

D. The material has a boiling point below room temperature and will rapidly evaporate into a visible gas cloud if the container is opened

21. A driver transporting Class 7 Radioactive materials discovers during an enroute inspection that a package has shifted and is now in direct contact with the wall separating the cargo area from the driver's cab. Why is this a concern?

A. The package may have been damaged during the shift, potentially compromising containment of the radioactive material inside

B. The package is now closer to the driver than the required separation distance based on the transport index, increasing radiation exposure

- C. Radioactive packages in contact with metal surfaces can transfer contamination to the vehicle structure through electrostatic attraction
- D. The weight of the radioactive package against the cab wall may cause structural damage to the wall during highway vibration

22. When preparing to fuel a vehicle that is carrying placarded hazardous materials, which of the following actions must the driver take before beginning the fueling process?

- A. Move all hazardous materials packages to the rear of the trailer to maximize distance between the cargo and the fuel tank
- B. Notify the fuel station attendant of the hazardous materials on board so they can activate the fire suppression system
- C. Open all cargo doors and trailer vents to ensure maximum air circulation through the cargo area during fueling
- D. Shut off the vehicle's engine and ensure that no person smokes within twentyfive feet of the vehicle during the entire fueling process

23. A Uniform Hazardous Waste Manifest is a multicopy document required for the transportation of hazardous waste. What is the primary purpose of this manifest?

- A. To create a chainofcustody record tracking the waste from the generator through the transporter to the designated disposal facility
- B. To calculate the driver's pay rate for the trip based on the weight, hazard class, and distance of the waste shipment
- C. To provide the EPA with realtime GPS tracking data for every truck carrying hazardous waste on public highways
- D. To certify that the driver has completed specialized hazardous waste handler training beyond the standard HazMat endorsement

24. A package of hazardous material bears an orientation label — two upwardpointing arrows on opposite sides of the package. What does this marking indicate?

- A. The package contains compressed gas cylinders that must be stored in an upright position with valves pointing upward
- B. The package must be loaded at the top of any stack and should not have other packages placed on top of it
- C. The package contains liquid in inner containers and must be kept upright to prevent leakage from the closures
- D. The arrows indicate the direction the package should be moved on a conveyor belt during automated sorting

25. A driver is hauling a mixed load of several different Table 2 hazardous materials. Two of the materials are from the same hazard class, with weights of 700 pounds and 400 pounds respectively. A third material is from a different class, weighing 300 pounds. What is the placarding requirement?

- A. No placards are required because no individual material weighs more than 1,001 pounds
- B. The first hazard class requires its specific placard because the combined weight of the two sameclass materials is 1,100 pounds, exceeding the 1,001pound threshold
- C. DANGEROUS placards are required because the total weight of all three materials combined exceeds 1,001 pounds
- D. All three materials require their specific class placards because any material on a vehicle with other HazMat must be individually placarded

26. Which of the following statements about the emergency response telephone number required on HazMat shipping papers is correct?

- A. The number must connect to a recorded message system that provides preprogrammed response instructions for each hazard class
- B. The number is only required during business hours and may be substituted with an email address for overnight shipments
- C. The number must be a tollfree number beginning with 1800 to ensure that emergency responders can call without charge
- D. The number must be monitored at all times by a person knowledgeable about the material or with immediate access to such a person

27. A driver completing a pretrip inspection of a placarded vehicle notices that one of the four placards is severely faded — the color is barely visible and the hazard class number cannot be read from more than a few feet away. Is this placard compliant?

A. No, placards must be maintained in a legible condition with the prescribed colors clearly visible, and a faded placard must be replaced before departure

B. Yes, as long as the diamond shape of the placard is still visible and the general color family can be determined by an observer

C. Yes, because placards are only required to be legible at the time of initial loading and normal weathering during transport is expected

D. No, but the driver may use a marker to trace over the faded numbers and darken the colors rather than replacing the entire placard

28. A HazMat driver observes a vehicle ahead swerving erratically and then sees the vehicle strike a guardrail and overturn. The overturned vehicle displays a placard with a green background and a gas cylinder symbol. Based on the placard, what hazard class is the overturned vehicle carrying?

A. Class 3 Flammable Liquid, indicated by a placard with flame symbol on a red background

B. Class 5, Division 5.1 Oxidizer, indicated by a placard with flameovercircle symbol on a yellow background

C. Class 2, Division 2.2 NonFlammable Gas, indicated by a placard with a gas cylinder symbol on a green background

D. Class 8 Corrosive, indicated by a placard showing liquids dripping onto a surface on a black and white background

29. What is the maximum number of consecutive identical correct answers (e.g., B, B, B) that should appear in an official CDL endorsement exam answer distribution?

A. One — no two consecutive questions should ever have the same correct answer letter on any standardized test

B. The CDL endorsement exam has no published rule limiting consecutive identical answers — the exam tests knowledge, not pattern recognition

- C. Three — federal testing standards require that no more than three consecutive questions share the same answer letter
- D. Five — the FMCSA mandates a maximum run of five identical answers to prevent answersheet scanning errors

30. A driver is transporting bulk quantities of a Division 6.1 Toxic material classified as Packing Group I, Inhalation Hazard Zone A. Which of the following correctly describes the placarding requirement for this material?

- A. This material is a Table 1 material requiring POISON INHALATION HAZARD placards at any quantity, regardless of weight
- B. This material requires POISON placards only when the total weight on the vehicle reaches or exceeds 1,001 pounds
- C. This material requires TOXIC placards at any quantity, but the INHALATION HAZARD marking is optional for highway transport
- D. This material is exempt from placarding when transported in UNcertified packaging with airtight seals and secondary containment

TANKER SECTION (Questions 31–50)

31. A tank vehicle operator is preparing to load a cargo tank with diesel fuel. The operator checks the specification plate and finds the tank is designated as DOT 412. Is this tank authorized for this product?

- A. No, DOT 412 tanks are designed for corrosive liquids such as strong acids and caustic solutions, not petroleum products like diesel fuel
- B. Yes, DOT 412 tanks are universal containers authorized for any liquid hazardous material regardless of class or properties
- C. Yes, because diesel fuel is classified as a mildly corrosive petroleum product that requires the additional protection of a DOT 412 tank
- D. No, but the operator may use the tank if the interior is first lined with a temporary plastic bladder to separate the fuel from the tank walls

32. What phenomenon causes the center of gravity of a tank vehicle to shift dynamically during a turn, increasing rollover risk beyond what the static center of gravity would suggest?

- A. Air pressure changes inside the tank during turning cause the tank shell to flex, raising the physical height of the tank structure
- B. The tires on the outside of the turn compress more than the inside tires, tilting the entire vehicle frame toward the outside of the curve
- C. The liquid cargo surges laterally to the outside of the turn and climbs the curved tank wall, shifting the center of gravity outward and upward
- D. The trailer suspension on the outside of the turn extends fully while the inside suspension compresses, raising the tank on one side

33. A tank vehicle driver approaches a traffic signal that turns yellow. The driver is hauling a full load of liquid fertilizer in a smooth bore tank. The intersection is approximately 200 feet ahead. The driver's speed is 40 mph. What is the safest action?

- A. Accelerate through the intersection to avoid being caught in the middle when the light turns red
- B. Begin braking early and gradually, applying steady pressure to bring the vehicle to a controlled stop before the intersection
- C. Downshift rapidly to use engine braking instead of the service brakes to avoid triggering forward liquid surge
- D. Maintain current speed and prepare to brake hard at the last possible moment to minimize time in the intersection

34. A cargo tank has been involved in a minor fenderbender accident. The tank shell was not contacted, but the rear bumper and frame of the vehicle sustained visible damage. The tank appears undamaged. Should the driver continue the trip?

- A. Yes, because only damage to the tank shell itself requires stopping the trip and obtaining a professional inspection
- B. Yes, as long as the driver conducts a visual walkaround and does not observe any leaks or visible tank damage

- C. No, the driver should immediately evacuate the area and call for a full hazmat response team to assess the situation
- D. No, the driver should stop and have the vehicle professionally inspected, because frame damage may have affected tank mounting integrity

35. What is the function of the remote shutoff controls found on cargo tank vehicles?

- A. They allow the driver to close the internal emergency shutoff valves from a position away from the discharge piping, without crawling under the tank
- B. They activate the vehicle's satellite tracking system to alert the carrier that the driver has initiated an emergency stop
- C. They lock all external valves and manholes simultaneously to prevent unauthorized access to the tank during overnight parking
- D. They engage the vehicle's parking brake and engine kill switch from outside the cab in case the driver is locked out

36. A tanker driver is operating a partially loaded (approximately 40 percent full) baffled tank on a winding mountain road. Which of the following statements about the driving hazards is correct?

- A. The partial load reduces rollover risk because the lighter vehicle has a lower overall center of gravity than a full load
- B. The baffles eliminate all surge concerns, so the driver can focus exclusively on the road geometry and speed limits
- C. The partial load increases surge intensity and rollover risk because the liquid has extensive room to shift in all directions, and baffles do not prevent sidetoside movement
- D. The winding road reduces surge because the constant directional changes prevent the liquid from building sustained momentum

37. During a pretrip inspection of a cargo tank, the driver tests the remote emergency shutoff handle and finds that it does not move — it appears to be seized or stuck. What should the driver do?

- A. Continue the trip but plan to use only the manual valve handles at the discharge point if an emergency arises during unloading
- B. Report the inoperable remote shutoff to the carrier and do not operate the vehicle until the shutoff mechanism is repaired and verified functional
- C. Spray the handle mechanism with penetrating lubricant, force it to move with a pipe wrench, and proceed if it loosens
- D. Bypass the remote shutoff system by wiring the internal valve in the open position and controlling flow with external valves only

38. A driver operating an MC 331 propane tank truck notices the incab pressure gauge reading is rising steadily, even though the ambient temperature has not changed significantly. What could this indicate?

- A. A possible malfunction in the pressure relief system or a developing problem with the tank's integrity that requires immediate investigation
- B. Normal operating behavior for MC 331 tanks, which routinely fluctuate in pressure throughout the day due to road vibration
- C. The truck's air brake system is overcharging, and the excess air pressure is being routed through the tank's pressure gauge
- D. The propane is converting from a liquefied state to a solid crystalline state, which naturally increases the gauge reading

39. What is a BLEVE, and under what conditions does it typically occur?

- A. A Bulk Liquid Emergency Valve Extension — a device that extends the discharge valve during a rollover to prevent leakage
- B. A Boiler Liquid Exhaust Ventilation Event — a routine pressure release from cryogenic tanks during normal operations
- C. A Balanced Load Equalization Valve Engagement — an automatic system that redistributes liquid between compartments
- D. A Boiling Liquid Expanding Vapor Explosion — a catastrophic tank failure that occurs when fire exposure weakens the shell while internal pressure rises from the boiling liquid

40. Why is it important for a tank vehicle driver to check the weight of the loaded vehicle on a certified scale after loading, rather than relying solely on the volume of liquid loaded?

- A. Scale readings are required by the customer's receiving facility as proof of the quantity delivered
- B. Volume measurements are unreliable because loading facility meters are never calibrated accurately
- C. Different liquids have different densities, so the same volume of different products produces significantly different weights that may exceed axle or gross weight limits
- D. The scale reading is needed to calculate the exact amount of outage space remaining in the tank after loading

41. A tank vehicle driver is approaching a railroad grade crossing while hauling a placarded load. What is the required procedure?

- A. Accelerate to cross the tracks as quickly as possible to minimize the time the vehicle is on the crossing surface
- B. Sound the vehicle's horn three times as a warning to any train that may be approaching from either direction
- C. Slow down but do not stop, and cross the tracks at a steady 15 mph unless a train is visibly approaching
- D. Stop within 50 feet but not closer than 15 feet from the nearest rail, look and listen for approaching trains, and proceed only when safe

42. A tank vehicle is being used to transport nonhazardous liquid food products. The vehicle has no placards displayed. Does the driver still need a Tanker endorsement?

- A. No, because the Tanker endorsement is only required when the cargo is a hazardous material requiring placards
- B. Yes, because the Tanker endorsement is required for any vehicle transporting liquid in a tank meeting the capacity thresholds, regardless of whether the liquid is hazardous
- C. No, because food products are specifically exempt from the Tanker endorsement requirement under FMCSA agricultural exemptions

D. Yes, but only if the food product is being transported across state lines for interstate commercial distribution

43. What is the primary reason a tank vehicle's stopping distance is longer than a comparably weighted dry van trailer?

A. Liquid surge pushes the vehicle forward during braking, adding a surge distance component that extends the total stopping distance beyond the mechanical braking limit

B. Tank vehicles have smaller brake drums than dry vans to reduce weight, which limits the mechanical braking force available

C. The cylindrical shape of the tank creates additional aerodynamic drag that paradoxically increases forward momentum during deceleration

D. Tank vehicle tires are inflated to lower pressures than dry van tires, which reduces the tire contact patch and available traction

44. During a cargo tank pretrip inspection, a driver discovers a visible crack in a weld seam on the exterior of the tank shell. No leaking is observed. What should the driver do?

A. Mark the crack with spray paint for identification, load the tank, and schedule a repair at the next available maintenance facility

B. Apply a temporary weld patch using the onboard welding kit carried on all cargo tank vehicles for field repairs

C. Report the crack to the carrier immediately and do not load or operate the vehicle until the crack has been professionally evaluated and repaired

D. Load the tank to no more than 50 percent capacity to reduce internal pressure on the cracked area during transport

45. A driver operating a loaded tank vehicle feels the vehicle begin to lean noticeably to one side while navigating a highway curve at moderate speed. What is likely happening, and what should the driver do?

A. The tire on the inside of the curve has gone flat, and the driver should accelerate out of the curve to reach a safe stopping area

B. The load has permanently shifted to one side due to a failed bulkhead, and the driver should stop immediately in the curve to inspect

C. The vehicle's suspension has failed on one side, and the driver should pump the brakes rapidly to redistribute weight evenly

D. The liquid cargo is surging to the outside of the curve, raising the center of gravity — the driver should avoid braking, gently reduce speed, and straighten the vehicle as soon as possible

46. What information does the "QT" marking stamped on or near a cargo tank's specification plate indicate?

A. The type of liquid product the tank is currently qualified to transport, based on the most recent chemical compatibility assessment

B. That the tank has passed its most recent qualification test — the comprehensive battery of tests required to certify the tank for service

C. The quarterly tonnage capacity of the tank, representing the maximum weight of cargo that may be loaded per calendar quarter

D. The quality tier rating assigned by the manufacturer, indicating the tank's relative durability compared to other models in the product line

47. A driver is operating a tank vehicle with a singlecompartment unbaffled tank that is approximately 25 percent full. How does this fill level compare to a halffull tank in terms of surge risk?

A. A quarterfull tank produces less severe surge than a halffull tank because the liquid has less mass to generate momentum, despite having more room to move

B. A quarterfull tank produces identical surge to a halffull tank because surge intensity is determined by tank geometry, not fill level

C. A quarterfull tank produces more severe surge than a halffull tank because the liquid accelerates faster with less resistance

D. A quarterfull tank produces no surge because the liquid volume is too small to generate any meaningful force against the tank walls

48. When loading a cargo tank with a flammable liquid, why should the initial product flow rate be kept low until the loading arm outlet is submerged below the liquid surface inside the tank?

- A. A low initial flow rate allows the driver to verify the product type by color before committing to a fullrate load
- B. A low initial flow rate prevents the loading facility's meters from producing inaccurate volume measurements
- C. Splash loading at high flow rates generates static electricity and flammable vapor, increasing the risk of ignition before the outlet is submerged
- D. A low initial flow rate allows time for the tank's pressure relief devices to adjust to the changing internal pressure

49. A tank vehicle has just been involved in a rollover. The driver has exited safely and moved upwind. Bystanders are attempting to approach the overturned tank to check if anyone else is inside. What should the driver tell them?

- A. Ask them to help push the tank upright so that any leaking material can be contained by the tank's bottom discharge valves
- B. Direct them to approach from the downwind side where they will be protected from any vapors by the vehicle's body
- C. Ask them to form a human chain around the tank to prevent other vehicles from driving through any spilled product
- D. Warn them to stay away from the vehicle and move upwind, because the tank may be leaking hazardous material that could produce toxic or flammable vapors

50. A tank vehicle driver completes a delivery and the tank is now completely empty. The tank carried a nonhazardous liquid (water). Does the driver still need a Tanker endorsement to drive the vehicle back to the terminal?

- A. Yes, but only if the empty tank still contains residual water above the 119gallon individual capacity threshold
- B. No, because an empty tank vehicle that has been drained of all product does not meet the definition of a tank vehicle requiring the endorsement
- C. Yes, because the Tanker endorsement is tied to the vehicle type, not the cargo — the endorsement is always required to operate a tank vehicle regardless of load status
- D. No, but only if the driver obtains written authorization from the carrier confirming the tank is empty before departing the delivery site

Practice Exam 3: Answer Key and Explanations

- 1. D** — Division 2.3 Poison Gas is a Table 1 material requiring POISON GAS placards at any quantity, regardless of weight. Class 8 Corrosive at 1,800 pounds exceeds the 1,001-pound Table 2 threshold, requiring CORROSIVE placards. When a vehicle carries materials from both tables that independently trigger placarding, both sets of placards must be displayed on all four sides.
- 2. B** — Class 2 (Gases) do not use the packing group system. Packing groups are assigned only to materials in Classes 3, 4, 5 (Division 5.1), 6 (Division 6.1), and 8. Chlorine is a Division 2.3 Poison Gas, and its shipping paper entry correctly omits the packing group designation because none is assigned to gases under the classification system.
- 3. C** — The driver's first priority is always personal safety. Corrosive liquids can cause severe chemical burns on contact with skin, eyes, and mucous membranes. The driver should move away from the leak without touching the material, then notify the carrier and emergency services from a safe distance. Attempting to upright a leaking drum of corrosive without proper protective equipment risks serious chemical injury.
- 4. A** — 49 CFR Part 177 specifically governs the carriage of hazardous materials by public highway. It contains the operational rules that drivers and carriers must follow — including loading and unloading procedures, segregation requirements, driving rules, parking restrictions, vehicle attendance, and route selection. This is the regulatory section most directly relevant to a HazMat driver's daily work.
- 5. D** — Knowing the hazard class before arrival allows the driver to verify that the correct placards are available, understand segregation requirements if combining with other cargo, anticipate special handling procedures for oxidizers, and confirm that the vehicle is properly configured for the material. The hazard class drives every downstream transportation requirement.
- 6. B** — Before connecting any product hose to transfer flammable liquids, grounding and bonding connections must be established to prevent static electricity discharge. Static sparks generated during liquid transfer are a well-documented ignition source for flammable vapors. The grounding cable connects the tank to earth, and the bonding cable equalizes the electrical potential between the cargo tank and the receiving tank.
- 7. A** — A placarded HazMat vehicle is considered attended when the driver is within 100 feet of the vehicle and has it in clear, unobstructed line of sight. Alternatively, the driver may be in the vehicle and awake. These are the only two conditions that satisfy the attendance requirement. Moving beyond 100 feet or losing sight of the vehicle means the vehicle is unattended.
- 8. C** — Division 1.4 is a Table 2 material that requires placarding when the aggregate gross weight reaches or exceeds 1,001 pounds. At 1,500 pounds, the threshold is exceeded, and EXPLOSIVES 1.4 placards must be displayed on all four sides of the vehicle. Division 1.4 is not exempt from placarding — it simply has a higher weight threshold than the more dangerous Divisions 1.1, 1.2, and 1.3.

9. D — Any unintentional release of a hazardous material during transportation — including loading, unloading, and temporary storage — requires a written Hazardous Materials Incident Report on DOT Form 5800.1, filed within thirty days of discovering the incident. This requirement applies regardless of whether the release caused injuries, property damage, or other consequences.

10. B — A hazardous material is any material regulated under the DOT's Hazardous Materials Table in 49 CFR §172.101. A hazardous substance is a specific subset — materials designated by the EPA that trigger mandatory spill reporting to the National Response Center when shipped at or above their reportable quantity. The "RQ" notation on shipping papers identifies hazardous substances at or above the reporting threshold.

11. C — Hazardous waste may only be delivered to the treatment, storage, or disposal facility identified on the Uniform Hazardous Waste Manifest. A facility name and address mismatch means the waste could be delivered to an unauthorized location, violating RCRA chainofcustody requirements. The driver must refuse delivery and contact the carrier for instructions.

12. A — CHEMTREC stands for Chemical Transportation Emergency Center. Operated by the American Chemistry Council, it provides twentyfourhour emergency response guidance and technical hazard information for chemical spills, leaks, fires, and exposures during transportation. CHEMTREC can be reached at 18004249300 and is one of the most widely used emergency response resources in the HazMat industry.

13. D — Neither the Division 4.1 material (600 lbs) nor the Division 5.1 material (600 lbs) individually reaches the 1,001pound Table 2 threshold. However, the combined aggregate weight of all Table 2 materials is 1,200 pounds, which exceeds 1,001 pounds. The DANGEROUS placard may be used when two or more Table 2 classes are present and the combined total meets the threshold, even though no single class does.

14. B — The fourdigit number 1075 displayed on the placard is the identification number of the material (propane). The responder looks up 1075 in the ERG's yellowbordered section (organized by ID number), finds the material name and the corresponding threedigit guide number, then turns to that guide in the orange section for specific fire, spill, and first aid response instructions.

15. C — A skull and crossbones on a white diamond is the hazard warning label for Division 6.1 Toxic (Poison) materials. When a package bears both a Flammable Liquid label and a Toxic label, the material has a subsidiary hazard — it is primarily flammable but also toxic. Both hazards must be communicated through labels and may also require subsidiary placarding on the vehicle.

16. A — The proper shipping name for gasoline in the Hazardous Materials Table is "Gasoline," and its identification number is UN1203. The proper shipping name must be used exactly as listed in Column 2 of the table — not trade names, abbreviations, or alternative descriptions. UN1203 is one of the most commonly encountered identification numbers in HazMat transportation.

17. D — A placarded HazMat vehicle must never be parked within 300 feet of an open fire, and a driver should never proceed through or near a fire zone. Wildfire burning near both sides

of the highway creates extreme heat exposure risk to the vehicle and cargo. The driver must stop well before the fire area and seek an alternate route or wait until the fire is controlled.

18. B — The word "Waste" preceding a proper shipping name on shipping papers identifies the material as hazardous waste being transported for disposal, treatment, or storage under the Resource Conservation and Recovery Act. Hazardous waste shipments require a Uniform Hazardous Waste Manifest and must be delivered only to the designated facility identified on the manifest.

19. A — The shipper bears the primary legal responsibility for properly classifying the hazardous material, determining its proper shipping name and hazard class, selecting appropriate packaging, marking each package, affixing the correct labels, preparing accurate shipping papers, and certifying compliance. The driver's role is to verify the shipper's work — not to perform it.

20. C — The "INHALATION HAZARD" marking is required on packages containing materials that are toxic by inhalation — substances whose vapors or dust can cause death or serious injury through breathing exposure. This marking alerts handlers, drivers, and emergency responders that the material presents a respiratory danger beyond its primary hazard classification and requires special precautions.

21. B — Radioactive packages must be separated from occupied spaces by distances based on the total transport index of the shipment. A package that has shifted into direct contact with the cab wall is now closer to the driver than the required separation distance allows, potentially increasing the driver's cumulative radiation exposure. The package must be repositioned to restore the required separation.

22. D — Before fueling a placarded vehicle, the engine must be shut off and no person may smoke within twentyfive feet of the vehicle. These precautions eliminate ignition sources — engine heat, exhaust sparks, and open flames — that could ignite fuel vapors from the fueling process or hazardous material vapors that may be present near the vehicle.

23. A — The Uniform Hazardous Waste Manifest creates a legal chainofcustody record that tracks hazardous waste from the generator (the entity producing the waste) through the transporter (the carrier and driver) to the designated treatment, storage, or disposal facility. Each party signs the manifest, creating an accountable paper trail that prevents illegal dumping or diversion.

24. C — Orientation arrows on a package indicate that the package contains liquids in inner containers (combination packaging) and must be kept upright during handling, loading, transport, and storage. The arrows point in the direction that must face up to prevent liquid from reaching closures and leaking. Loading the package on its side or upside down could cause the inner containers to leak.

25. B — The two materials from the same hazard class must have their weights combined: $700 + 400 = 1,100$ pounds. Since this exceeds the 1,001pound Table 2 threshold for that class, the specific class placard must be displayed. The third material from a different class at 300 pounds does not independently reach 1,001 pounds and does not require its own placard unless combined with other sameclass materials.

26. D — The emergency response telephone number on HazMat shipping papers must be monitored at all times — twentyfour hours a day, seven days a week — by a person who is knowledgeable about the hazardous material being shipped or who has immediate access to such a person. A recording, voicemail, or email address does not satisfy this requirement because responders need realtime interaction.

27. A — Placards must be maintained in a legible condition with the prescribed colors clearly visible throughout the trip. A severely faded placard that cannot be read from a reasonable distance fails this standard and must be replaced before the vehicle departs. The purpose of placards is to communicate hazard information visually at a distance — an unreadable placard defeats this purpose entirely.

28. C — A green background with a gas cylinder symbol is the placard for Class 2, Division 2.2 NonFlammable, NonPoisonous Compressed Gas. Each hazard class has a distinctive placard color and symbol combination: red for flammable, yellow for oxidizer, white with skull for poison or poison gas, blue for dangerous when wet, and green for nonflammable gas.

29. B — The CDL endorsement exam is a knowledge test with no published rule limiting consecutive identical answer letters. Questions are selected from a question bank based on content coverage, and the correct answer for each question is determined by the subject matter — not by pattern distribution. Drivers should focus on learning the material rather than looking for answer patterns.

30. A — Division 6.1 Toxic materials in Packing Group I with Inhalation Hazard Zone A or B are Table 1 materials. Table 1 materials require their specific placard — in this case POISON INHALATION HAZARD — at any quantity, with no minimum weight threshold. These materials represent an extreme immediate danger because even brief exposure to low vapor concentrations can be lethal.

31. A — DOT 412 tanks are designed specifically for corrosive liquid chemicals such as strong acids and caustic solutions. They feature heavyduty construction with corrosionresistant materials and linings to withstand aggressive chemical attack. Diesel fuel is a nonpressure petroleum product that requires a DOT 406 tank. Loading diesel into a DOT 412 is using the wrong specification for the product.

32. C — During a turn, the liquid cargo surges laterally to the outside of the curve due to centrifugal force. As the liquid presses against the curved interior wall of the cylindrical tank, it climbs upward along the wall, shifting the center of gravity both outward and upward. This dynamic shift compounds the centrifugal force already acting on the vehicle, significantly increasing the rollover moment.

33. B — In a smooth bore tank carrying a full load, abrupt braking produces maximum unrestricted surge. The safest approach is to begin braking early and gradually, applying steady pressure to decelerate progressively. This gives the liquid time to settle incrementally rather than slamming forward in a single violent wave. Early, gradual braking is the fundamental braking technique for all tank vehicles.

34. D — Even when the tank shell appears undamaged, frame damage from a collision may have affected the tank's mounting hardware — the brackets, saddles, bolts, and welds that secure the tank to the chassis. Compromised mountings may not be visible during a visual

walkaround but could fail during transport. A professional inspection should evaluate the structural integrity before the vehicle returns to service.

35. A — Remote shutoff controls allow the driver to close the internal emergency shutoff valves from a position away from the discharge piping — typically from the driver's side of the vehicle or from the unloading position. This is critical when external piping is damaged or leaking, because it allows the driver to stop product flow without crawling under the tank to access the damaged area directly.

36. C — A partially loaded tank at approximately 40 percent capacity provides extensive room for the liquid to shift in all directions. Baffles reduce forward and backward surge but do not prevent side-to-side surge, which is the primary contributor to rollover on curves. The combination of a partial load, winding roads, and side-to-side surge creates an elevated rollover risk that demands significantly reduced cornering speeds.

37. B — The remote emergency shutoff is a critical safety device that must function reliably in an emergency. A seized or stuck handle means the driver cannot close the internal valves from a safe position if external piping is damaged during transport. The vehicle should not operate until the mechanism is repaired and verified functional by maintenance personnel.

38. A — A steadily rising pressure gauge on an MC 331 tank without a corresponding temperature increase may indicate a malfunction in the pressure relief system or a developing problem with the tank's integrity. This is an abnormal condition that requires immediate investigation. The driver should stop in a safe location and report the condition to the carrier before continuing operation.

39. D — A BLEVE (Boiling Liquid Expanding Vapor Explosion) is a catastrophic tank failure that occurs when external fire heats the tank shell, weakening its structural integrity, while simultaneously heating the liquid inside to its boiling point, increasing internal pressure. When the weakened shell can no longer contain the pressure, it ruptures explosively, releasing all contents in an instantaneous fireball and pressure wave.

40. C — Different liquids have different densities — water weighs approximately 8.34 lbs/gal, gasoline approximately 6.1 lbs/gal, and sulfuric acid approximately 15.3 lbs/gal. The same volume of different products produces dramatically different weights. A tank loaded by volume could easily exceed axle weight limits or gross vehicle weight limits with a dense product. Weighing on a certified scale is the only reliable verification.

41. D — Drivers of placarded vehicles carrying hazardous materials must stop at railroad grade crossings within 50 feet but not closer than 15 feet from the nearest rail. The driver must look and listen in both directions for approaching trains, and may proceed only when it is safe to cross completely without stopping on the tracks. This mandatory stop applies regardless of whether gates or signals are present.

42. B — The Tanker endorsement is required based on the vehicle type and cargo form — liquid or gaseous material in a tank meeting the capacity thresholds — not based on whether the cargo is hazardous. A vehicle transporting 5,000 gallons of milk, water, or juice requires the same Tanker endorsement as one carrying 5,000 gallons of gasoline. The physics of liquid surge and rollover risk are identical regardless of hazard classification.

43. A — Liquid surge is the primary reason tank vehicles have longer stopping distances than comparably weighted dry vans. When brakes are applied, the liquid continues moving forward due to momentum, slamming against the front of the tank and exerting a force that pushes the vehicle forward even while the brakes are engaged. This surge distance adds to the mechanical braking distance, extending the total stopping distance.

44. C — A visible crack in a weld seam on the tank shell is a serious structural deficiency that could propagate under the stress of loading, pressurization, or road vibration, potentially leading to a catastrophic tank failure. The driver must report the crack immediately and must not load or operate the vehicle until the crack has been professionally evaluated and repaired by qualified personnel.

45. D — The noticeable lean during a curve indicates that the liquid cargo is surging to the outside of the turn, shifting the center of gravity laterally and raising rollover risk. The driver should not brake in the curve (which would add forward surge to the lateral surge), but should gently reduce speed by easing off the accelerator and straighten the vehicle as soon as the road geometry allows.

46. B — The "QT" marking on or near a cargo tank's specification plate indicates that the tank has passed its most recent qualification test — the comprehensive battery of tests (visual, pressure, leakage, thickness) required to certify the tank for service. The QT marking includes the month and year of the test, allowing the driver and inspectors to verify that the tank's certification is current.

47. A — A quarterfull tank has more empty space than a halffull tank, giving the liquid more room to move, but it has significantly less liquid mass to generate momentum. Surge intensity depends on both the room available to build speed and the mass of liquid striking the tank wall. A halffull tank represents the worstcase balance of room and mass, producing more severe surge than either a quarterfull or a fully loaded tank.

48. C — When liquid falls freely through air inside the tank (splash loading), it generates significant static electricity and produces large quantities of flammable vapor as it splashes against the tank walls and liquid surface. Keeping the initial flow rate low until the loading arm outlet is submerged below the liquid surface eliminates splash loading, dramatically reducing both static generation and vapor production.

49. D — Bystanders approaching an overturned tank vehicle risk exposure to hazardous materials that may be leaking from compromised fittings, cracked seams, or failed manhole covers. The driver should warn them to stay away and move upwind, because vapors from the leaking product could be toxic, flammable, or both. Wellintentioned bystanders entering a contaminated area become potential casualties rather than helpers.

50. B — An empty tank vehicle that has been completely drained of all product — including a nonhazardous liquid like water — does not meet the tank vehicle definition because it is not transporting liquid. The Tanker endorsement requirement is triggered by the act of transporting liquid or gas in a qualifying tank, not by the physical presence of a tank on the vehicle. However, if any residual liquid remains, the endorsement may still be required.