U.S.C.G. Merchant Marine Exam

Tankerman Assistant

Q456 Tankship Dangerous Liquids

(Sample Examination)
Chose the best answer to the following Multiple Choice Questions.

1. What is NOT a precaution to be taken when topping off?
   - (A) Maintain communications with the dock man.
   - (B) Give the operation your undivided attention.
   - (C) Reduce the loading rate.
   - (D) Notify the engine room of the procedure.

   If choice D is selected set score to 1.

2. Your tank vessel is loaded down to her marks, and you find that she has too much trim by the stern. What action should you take to obtain an even keel and still maintain profitability?
   - (A) discharge cargo amidships
   - (B) load more cargo forward
   - (C) shift bunkers forward
   - (D) add ballast forward

   If choice C is selected set score to 1.

3. According to U.S. regulations, no person may transfer oil to or from a vessel unless each person in charge has signed what document?
   - (A) valve inspection record
   - (B) oil record book
   - (C) certificate of inspection
   - (D) declaration of inspection

   If choice D is selected set score to 1.

4. According to U.S. regulations, which conditions would not disqualify a nonmetallic hose as being suitable for use in transferring oil?
   - (A) A leak in the flange gasket while hydrostatically testing the hose.
   - (B) A slight oil seepage between the hose and flange connection.
   - (C) A small cut in the hose cover which just pierces the reinforcement.
   - (D) Evidence of internal or external deterioration.

   If choice A is selected set score to 1.
5. Oil product samples should be taken at the commencement and completion of loading operations. As the person in charge, where should the final samples be taken?

- (A) the shoreline low points
- (B) the shore tank discharge
- (C) the dock riser
- (D) the vessel's cargo tanks

*If choice D is selected set score to 1.*

6. Protective clothing must be worn while sampling hazardous cargo on a tankship. This clothing includes which of the following at a minimum?

- (A) a face mask or goggles
- (B) boots
- (C) a hood or hard hat
- (D) chemical resistant gloves

*If choice A is selected set score to 1.*

7. On modern tankers with separate pumprooms, which of the following is used to minimize cargo pump shaft leakage?

- (A) Mechanical seals
- (B) Shaft sleeves
- (C) Stuffing box glands
- (D) Slinger rings

*If choice A is selected set score to 1.*

8. When tank cleaning with a portable machine, how is the weight of the machine is suspended?

- (A) a portable davit
- (B) a wire rope suspension line
- (C) a natural fiber tag line, saddle and hose
- (D) solid metal bars clamped to the Butterworth opening

*If choice C is selected set score to 1.*

9. What should be the first consideration when discharging an oil cargo?

- (A) discharge from the wings first
- (B) discharge from amidships first
- (C) get the bow up
- (D) discharge from the centerline tanks first

*If choice C is selected set score to 1.*
10. Why is a warning sign displayed at the gangway or access point of a barge during cargo transfer?

- (A) To designate smoking areas
- (B) To indicate any health risk if applicable
- (C) To keep visitors away from the barge
- (D) To indicate if the cargo is a marine pollutant

*If choice C is selected set score to 1.*

11. It would be prudent to perform which of the following actions prior to the commencement of bunkering?

- (A) plug the vents
- (B) close the lids on the vents
- (C) plug the scuppers
- (D) plug the sounding pipes

*If choice C is selected set score to 1.*

12. Which of the following terms best describes the amount of product in a tank measured from the tank top to the level of liquid?

- (A) Thievage
- (B) Ullage
- (C) Outage
- (D) Innage

*If choice D is selected set score to 1.*

13. When loading bulk liquid cargo, what is the FIRST action you should take if a cargo valve jammed open?

- (A) Run out the vessel or terminal fire hose.
- (B) Order the dock man to shut down.
- (C) Trip the pump relief valve.
- (D) Call the owner, operator, or terminal supervisor.

*If choice B is selected set score to 1.*

14. "Line Displacement" is a procedure that is followed at an oil terminal facility, when there is a change of which of the following?

- (A) product after the final discharge
- (B) product during the final phase of loading
- (C) cargo lines at the terminal before loading
- (D) product before the start of loading

*If choice B is selected set score to 1.*
15. While loading bulk oil, you notice oil on the water near the barge. Which of the following actions should you carry out FIRST?

- (A) Stop loading
- (B) Notify the Coast Guard
- (C) Notify terminal superintendent
- (D) Search the vessel for leaks

*If choice A is selected set score to 1.*

16. Combustion can occur inside a piping system such as a vapor collection header in a marine emission control system. Which of the following will not aid in this combustion process?

- (A) nitrogen
- (B) fuel
- (C) ignition
- (D) oxygen

*If choice A is selected set score to 1.*

17. Which of the following is an example of an example of a grade D product?

- (A) heavy fuel oil
- (B) kerosene
- (C) commercial gasoline
- (D) aviation gas grade 115/145

*If choice B is selected set score to 1.*

18. How can you determine which grades of cargo a tank vessel is permitted to carry?

- (A) check the loading order
- (B) refer to the vessel's Certificate of Inspection
- (C) examine the cargo tanks and fittings
- (D) ask the terminal supervisor or his representative

*If choice B is selected set score to 1.*

19. Who completes the Declaration of Inspection before loading a tank vessel?

- (A) The American Bureau of Shipping.
- (B) The US Coast Guard.
- (C) The manager of the shore facility.
- (D) The designated person in charge.

*If choice D is selected set score to 1.*
20. Where would be the most likely location for a liquid cargo fire to occur on a tanker?

- (A) at the vent header
- (B) in the midships house
- (C) at the main deck manifold
- (D) in the pumproom

*If choice D is selected set score to 1.*

21. 46 CFR directs the location of fuel oil sounding tubes and access openings for fuel oil tanks on cargo vessels. Where can the tubes be located?

- (A) Cargo-holds
- (B) Crew lounge
- (C) Laundries
- (D) Washrooms

*If choice A is selected set score to 1.*

22. Your vessel is taking on cargo oil when a small leak develops in the hose. You order the pumping stopped. What action should you take before you resume pumping?

- (A) notify the terminal superintendent
- (B) repair the hose with a patch
- (C) replace the hose
- (D) place a large drip pan under the leak and plug the scuppers

*If choice C is selected set score to 1.*

23. On tankers with manually operated tank valves, which of the following is the type of valve most commonly used?

- (A) globe valve
- (B) butterfly valve
- (C) gate valve
- (D) check valve

*If choice C is selected set score to 1.*

24. How does an inert gas system on a tanker function to prevent explosions in cargo tanks?

- (A) Maintains a positive pressure on the vent header to cool the flammable vapors.
- (B) De-energizes the “charged mist” effect.
- (C) Inert gas filters out the flammable vapors from the cargo tank spaces.
- (D) Inert gas dilutes the flammable vapor and air concentrations to keep them below the lower explosive limit.

*If choice D is selected set score to 1.*
25. What do the designations A, B, C, D, and E grades of cargo define?

- (A) grades of crude oil
- (B) flash point range and Reid vapor pressure index of petroleum products
- (C) degrees of quality of petroleum products
- (D) pour point, color, and viscosity index of petroleum products

*If choice B is selected set score to 1.*

26. According to U.S. regulations, no person may connect or disconnect an oil transfer hose or engage in any other critical oil transfer operation on a tank vessel unless which of the following is met?

- (A) the designated person in charge supervises that procedure
- (B) that person holds a tankerman assistant endorsement
- (C) that person holds a valid port security card
- (D) that person holds a license as master, mate, or engineer

*If choice A is selected set score to 1.*

27. What is the lowest temperature at which a liquid will give off sufficient vapors to form a flammable mixture with air?

- (A) flash point
- (B) fire point
- (C) threshold limit value
- (D) lower explosive limit

*If choice A is selected set score to 1.*

28. On a tanker vessel, what is the required combined capacity of the inert gas generating system as compared to the total capacity of all the cargo pumps which can be operated simultaneously?

- (A) 50%
- (B) 75%
- (C) 100%
- (D) 125%

*If choice D is selected set score to 1.*

29. What term is not considered a "discharge" as it applies to the U.S. pollution regulations?

- (A) pumping a harmful substance
- (B) leaking diesel fuel oil
- (C) sampling a harmful substance
- (D) spilling a harmful substance

*If choice C is selected set score to 1.*
30. Which statement about the use of portable electric lights in petroleum product tanks is TRUE?

- (A) They must be explosion-proof, self-contained, battery-fed lamps.
- (B) They can be used only when the compartment is gas free.
- (C) The fixture must be explosion-proof and the line must have a ground wire.
- (D) No portable electric equipment of any type is allowed.

*If choice A is selected set score to 1.*

31. According to U.S. regulations, which of the following conditions would disqualify a nonmetallic hose as being suitable for use in transferring oil?

- (A) Evidence of internal or external deterioration.
- (B) A cut in the cover which makes the reinforcement visible.
- (C) A blown gasket when hydrostatic test pressure is applied.
- (D) The hose has not been tested in the last 180 days.

*If choice A is selected set score to 1.*

32. What does the MARPOL 73/78 convention deal with?

- (A) International Convention of Safety of Life at Sea
- (B) International Convention on Standards of Training Certification and Watchkeeping
- (C) International Convention for the Prevention of Pollution from Ships
- (D) International Marine Organization Gas Carrier Code

*If choice C is selected set score to 1.*

33. Your tank vessel is loaded down to her marks, and you find that she has too much trim by the stern. Which of the following actions would reduce the excessive trim?

- (A) load more cargo forward
- (B) add ballast forward
- (C) shift bunkers forward
- (D) discharge cargo from the after tanks

*If choice C is selected set score to 1.*

34. The person in charge on the vessel and the person in charge at the facility must hold a meeting before starting the transfer of oil. Who must decide to start the transfer?

- (A) The person in charge of either place that is doing the pumping
- (B) Both persons in charge
- (C) The person in charge at the facility
- (D) The person in charge on the vessel

*If choice B is selected set score to 1.*
35. What is the distance between the surface of the liquid and the tank top in a cargo tank called?

- (A) Thievage
- (B) Tankage
- (C) Ullage
- (D) Innage

*If choice D is selected set score to 1.*

36. On tankers ullages are measured from what point?

- (A) an above-deck datum such as the top of the ullage pipe
- (B) the tank ceiling aboard transversely framed vessels
- (C) the tank top
- (D) a thievage mark below the edge of the deck

*If choice A is selected set score to 1.*

37. U.S. regulations require which of the following upon completion of oil transfer operations?

- (A) all valves used during transfer shall be closed
- (B) all soundings shall be entered in the oil record book
- (C) all hoses shall be blown down with air
- (D) all persons on duty during oil transfer shall be accounted for

*If choice A is selected set score to 1.*

38. U.S. regulations state that no person may transfer oil to or from a vessel unless which of the following conditions is met?

- (A) a representative sample has been taken from the oil being received
- (B) an oil containment boom is available for immediate use
- (C) all parts of the transfer system have been properly lined up
- (D) oil residue has been drained from all hoses

*If choice C is selected set score to 1.*

39. For all loading operations, the terminal must supply the vessel with a means in which the vessel's designated person in charge may stop the flow of oil to the vessel, insuring immediate shutdown in the event of a hose rupture, tank overflow, etc. Which of the following choices will accomplish this task as required by 33 CFR?

- (A) a pneumatically or mechanically operated device
- (B) a signal-board on the bridge
- (C) a loudhailer from the vessel bridge
- (D) a specific sequence of lights

*If choice A is selected set score to 1.*
40. Which of the following describes heavy fuel oils when they have been spilled?

- (A) they are more harmful to sea life than lighter oils
- (B) they are not a real threat to marine life
- (C) they are less harmful to sea life than lighter oils
- (D) they are easier to clean up than lighter refined oils

*If choice C is selected set score to 1.*

41. What is the lowest temperature at which the vapors of a flammable liquid will ignite and cause self-sustained combustion in the presence of a spark or flame?

- (A) fire point
- (B) autoignition temperature
- (C) flash point
- (D) vaporization temperature

*If choice A is selected set score to 1.*

42. What would likely happen if you were exposed to a 100% methane atmosphere for more than 15 minutes?

- (A) suffocate
- (B) break out in a cryogenic rash
- (C) be severely burned
- (D) become quite ill due to the toxic nature of the gas

*If choice A is selected set score to 1.*

43. When providing first aid to a victim of gas poisoning, what is the MOST important symptom to check for?

- (A) suspension of breathing
- (B) cold and moist skin
- (C) slow and weak pulse
- (D) unconsciousness

*If choice A is selected set score to 1.*

44. The flame screens installed on tank vents that may contain combustible gases, are designed to prevent explosions by which of the following?

- (A) preventing flammable vapors from entering the tank
- (B) dissipating the heat of an external flame
- (C) absorbing any flammable vapors in the vicinity
- (D) allowing the escape of flammable vapors

*If choice B is selected set score to 1.*
45. The term "segregated ballast" is defined in the U.S. regulations as ballast water introduced into which of the following?

- (A) oily-water separator for segregation
- (B) isolated tank for analysis because of its noxious properties
- (C) fuel settling tank for segregation from lighter fluids
- (D) tank that is completely separated from the cargo oil and fuel oil systems

*If choice D is selected set score to 1.*

46. Your vessel is taking on cargo oil when a small leak develops in the hose. You order the pumping stopped. Before you resume pumping, which of the following action should you perform?

- (A) notify the terminal superintendent
- (B) place a large drip pan under the leak and plug the scuppers
- (C) replace the hose
- (D) repair the hose with a patch

*If choice C is selected set score to 1.*

47. Which of the following represents an emergency procedure used to stop the oil flow aboard tank vessels, of 250 tons or greater, as required by U.S. regulations?

- (A) Manually-operated quick-closing valve
- (B) Self-closing emergency disconnect fitting
- (C) Pressure-sensitive oil pressure controller
- (D) Quick-acting power actuated valve

*If choice D is selected set score to 1.*

48. U.S. regulations require a meeting before starting any oil transfer operation. Who must be in attendance at this meeting?

- (A) master of the vessel and the terminal superintendent
- (B) person in charge of the oil transfer operations on the vessel and the person in charge of the oil transfer operations at the facility
- (C) master and chief engineer of the vessel and the terminal supervisor
- (D) terminal supervisor, master of the vessel and the Coast Guard

*If choice B is selected set score to 1.*

49. Who must supervise functions aboard a tanker or tank barge such as connecting, disconnecting, and topping off?

- (A) the master of the vessel
- (B) the person designated as "person in charge"
- (C) the officer of the watch
- (D) any certificated tankerman

*If choice B is selected set score to 1.*
50. What do the emergency shutdown requirements of U.S. regulations apply to?

- (A) condensate pumps
- (B) air compressors
- (C) induced draft fans
- (D) cargo transfer systems

*If choice D is selected set score to 1.*