U.S.C.G. Merchant Marine Exam

Towing Vessels-Western Rivers

Q424 Deck Safety

(Sample Examination)
Choose the best answer to the following multiple choice questions.

1. Which of the following in the illustration is the head of boat deck on a towboat? Illustration WR002DG
   - (A) B
   - (B) C
   - (C) H
   - (D) S

   If choice D is selected set score to 1.

2. Which topic is required by regulation to be covered in the Safety Orientation given to new crewmembers on your towboat?
   - (A) The location, operation and use of lifesaving equipment
   - (B) Wartime security measures
   - (C) Proper painting procedures
   - (D) Advanced firefighting techniques

   If choice A is selected set score to 1.

3. You are reading the draft marks as shown in illustration D032DG. The top 2 inches of number "9" are visible above the waterline. What is the draft?
   - (A) 8'-10"
   - (B) 9'-02"
   - (C) 9'-04"
   - (D) 9'-08"

   If choice C is selected set score to 1.

4. The owner or Master of a towing vessel shall ensure that all tests and inspections of gear take place. When are these actions required to be logged?
   - (A) When a new Master assumes command
   - (B) Immediately after assuming the watch
   - (C) Weekly, before 2400 Saturday
   - (D) Daily, at 0800 local zone time

   If choice A is selected set score to 1.
5. What is the name of the circular steel structure installed around the propeller (wheel) of a towboat?
   o (A) Hood
   o (B) Kort nozzle
   o (C) Strut
   o (D) Shroud

   If choice B is selected set score to 1.

6. Which extinguishing agent is/are suitable to combat a class B fire in an engine compartment?
   o (A) Dry chemical
   o (B) Carbon dioxide
   o (C) Foam
   o (D) All of the above

   If choice D is selected set score to 1.

7. You are in a channel in U.S. waters near an industrial plant with a load/discharge facility for barges. You hear a siren being sounded at the facility. What does this indicate?
   o (A) The facility is warning a barge to shut down transfer operations due to weather conditions (electrical storms, tornado, etc.).
   o (B) There is danger at the facility due to a fire or cargo release.
   o (C) A towboat with a hazardous cargo barge is being moved to or from the facility.
   o (D) A barge at the facility has commenced loading or discharging operations.

   If choice B is selected set score to 1.

8. Which time frame must you ensure that the new crew members that have never participated in the required drills on your towboat receive their safety orientation?
   o (A) Within 24 hours of reporting for duty
   o (B) Prior to reporting aboard the towboat
   o (C) Within the first week of reporting aboard
   o (D) Within the first month of reporting aboard

   If choice A is selected set score to 1.

9. What condition will result in the automatic shutdown of a diesel engine?
   o (A) Excessive turbo charger speed
   o (B) Low lube oil pressure
   o (C) High jacket water pressure
   o (D) High lube oil pressure

   If choice B is selected set score to 1.
10. Which publication(s) must a towing vessel of 12 meters or more in length carry when operating on US waters other than the Western Rivers?

- (A) US Coast Pilot(s)
- (B) Notice to Mariners
- (C) Tide Tables and Tidal Current Tables
- (D) All of the above

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

11. A fuel line breaks, sprays fuel on the hot exhaust manifold, and catches fire. What should be your FIRST action?

- (A) Secure the fuel supply
- (B) Batten down the engine room
- (C) Apply carbon dioxide to the fire
- (D) Start the fire pump

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

12. If you see an individual fall overboard, which action(s) should you take?

- (A) Throw him/her a life buoy
- (B) Hail "man overboard"
- (C) Pass the word to the bridge
- (D) All of the above

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

13. What is one effect of running a diesel engine at too cool a temperature?

- (A) Foaming of the lubricating oil
- (B) Buildup of sludge in the lubricating system
- (C) Severe heat stresses on mechanical parts
- (D) Excessive fuel consumption

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

14. Which is a requirement of the fire main system on a towboat?

- (A) Nozzles fitted to the hoses shall be corrosion-resistant material and only provide a solid stream
- (B) Fixed fire pumps shall be located outside of the machinery spaces
- (C) Portable fire pumps with its hoses and nozzles must be readily accessible and stowed inside the machinery space
- (D) A single length of hose must be capable of reaching any part of the machinery space

*If choice D is selected set score to 1.*
15. Which defines the function of a spark arrestor?

- (A) It keeps sparks from falling into an open tank
- (B) Grounds static electricity reducing chance of explosion
- (C) Utilized to secure covers on ullage openings
- (D) Prevents sparks from getting out of an engine’s exhaust system

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

16. Which of the following in the illustration is the headlog? Illustration WR003DG

- (A) A
- (B) C
- (C) G
- (D) I

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

17. Which is TRUE concerning work vests worn on towboats?

- (A) Crew members are required to wear work vests at all times while aboard the towboat
- (B) Regulations require work vests to be worn any time a crew member is on the exterior of the towboat
- (C) A safety line is an acceptable substitute for a work vest while working on a barge
- (D) Work vest may not be substituted for lifejackets as required by 46 CFR part 141

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

18. Your towboat has a ruptured hull and taking on more river water than the pumps can remove. The decision has been made to abandon the boat. Which is the next action you should take?

- (A) Muster the crew members
- (B) Start the fire pumps
- (C) Sound the “Abandon Ship” signal
- (D) Instruct all crew members to don work vests

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

19. You have launched the towboat’s yawl to recover a person that has fallen overboard. Which is the best way to approach an unconscious person in the river?

- (A) From down river of the victim
- (B) Approach with the current on your port side
- (C) Approach with the current on your starboard side
- (D) From up river of the victim

*If choice A is selected set score to 1.*
20. You are operating a light boat and have been in a collision with another towboat. After sounding the general alarm and accounting for your crew which is the next prudent action to take?

- (A) Put the boat hard up on the bank
- (B) Sound bilges and tanks
- (C) Fill out the 2692 report and send to the USCG
- (D) Apply air pressure to the fuel tanks and look for bubbles

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

21. Which of the following, if removed will extinguish a fire?

- (A) Carbon dioxide
- (B) Sodium
- (C) Oxygen
- (D) Nitrogen

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

22. What must the owner or Master do if any of the towing vessel's required navigational safety equipment fails during a voyage?

- (A) Repair it at the earliest practicable time
- (B) Consider the state of the equipment in deciding whether it is safe for the vessel to proceed
- (C) Enter its failure in the log or other on board record
- (D) All of the above

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

23. Which is TRUE concerning towing vessels of more than 39.4 feet in length carrying charts or maps?

- (A) The charts or maps will have enough detail to make safe navigation possible
- (B) The charts or maps shall be of the area to be navigated
- (C) The charts or maps shall be a current edition or currently corrected edition
- (D) All of the above

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

24. After an item of required safety equipment on a towing vessel fails, the owner or Master must consider numerous factors before continuing the voyage. Which factor should NOT be included in his/her decision?

- (A) The weather conditions, including visibility
- (B) The estimated time of arrival promised to the customer
- (C) The dictates of good seamanship
- (D) The safety of the vessel, considering the other traffic in the area

*If choice B is selected set score to 1.*
25. A fire of escaping liquefied flammable gas is best extinguished by which action?
   - (A) Cooling the gas below the ignition point
   - (B) Stopping the flow of gas
   - (C) Interrupting the chain reaction
   - (D) Cutting off the supply of oxygen

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

26. Your towing vessel must have either a fixed fire pump or a portable pump. What is the required capacity of the portable fire pump?
   - (A) 50 psi discharge at the pump with a flow rate of 80 gpm
   - (B) 60 psi discharge at the pump with a flow rate of 80 gpm
   - (C) 70 psi discharge at the pump with a flow rate of 50 gpm
   - (D) 80 psi discharge at the pump with a flow rate of 50 gpm

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

27. Which statement is TRUE concerning survival craft requirements for towing vessels on Western Rivers?
   - (A) All survival craft intended for River Use shall be outfitted with a green smoke signal
   - (B) The survival craft must accommodate 200% of the crew onboard
   - (C) The towboat's skiff maybe substituted for the survival craft
   - (D) All survival craft for Rivers Use shall be powered by a diesel engine

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

28. By regulation, the crew of your towboat must receive monthly instruction on which topic?
   - (A) Operation of the fog signal
   - (B) Hydro testing high pressure cylinders
   - (C) Operation of the main engine lube oil pump
   - (D) Fire fighting in the towboat's engine room

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

29. If an engine shuts down due to high jacket water temperature, what action should be taken?
   - (A) Allow engine to cool gradually
   - (B) Open crankcase explosion covers
   - (C) Slowly add cool water to the expansion tank
   - (D) Back flush the cooling water system

   *If choice A is selected set score to 1.*
30. Which of the following in the illustration is the wing tank of hopper barge? Illustration WR003DG
   - (A) A
   - (B) H
   - (C) K
   - (D) L

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

31. After extinguishing a paint locker fire using the fixed CO2 system, which is the next action that should be taken to the space?
   - (A) Douse the space with water to prevent reflash
   - (B) Keep the space closed with vents off until all boundaries are cool
   - (C) Open the space and all burned material removed
   - (D) Check the oxygen content of the space

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

32. Which is TRUE concerning the Kort nozzles installed around the propellers of some vessels?
   - (A) The nozzles protect the propeller from striking sawyers
   - (B) The nozzles prevent the propeller from striking barges towed on the hip
   - (C) The nozzles prevent the propeller from touching bottom in low water
   - (D) The nozzles increase the thrust of the propeller

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

33. Your light boat has been damaged in a collision and is taking on water. Which is the correct action to take to minimize damage?
   - (A) Put the boat in shallow water or on the bank
   - (B) Sound all tanks to ascertain which contain water
   - (C) Close all engine room doors to slow flooding
   - (D) Call the local Coast Guard office

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

34. Where a propeller shaft passes through the hull, which device prevents water from entering the hull?
   - (A) propeller boss
   - (B) sea cock
   - (C) stuffing box
   - (D) stop-water

   *If choice C is selected set score to 1.*
35. How can you indicate that your vessel is in distress?

- (A) Continuously sounding the fog whistle
- (B) Displaying a large red flag
- (C) Sounding five or more short and rapid blasts on the whistle
- (D) Displaying three black balls in a vertical line

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

36. What is the difference between a Type One PFD life jack and a Type Five PFD work vest?

- (A) The work vest has a higher buoyancy rating than a life jacket
- (B) A work vest will not float an unconscious person face up
- (C) Life jackets are more comfortable to wear while working the barges
- (D) A Type One PFD Life Jacket is designed for cold weather only

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

37. You are reading the draft marks as shown in illustration D032DG. The top 2 inches of the 9 forward is visible above the water level, and the water level is four inches below the 10 aft. What is the mean draft?

- (A) 9'-10"
- (B) 9'-06"
- (C) 9'-04"
- (D) 9'-02"

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

38. You have completed stability calculations for your vessel prior to getting underway. Your vessel's GM is small but positive. Which of the following is true?

- (A) The vessel will possess high initial stability
- (B) The vessel will possess a long rolling period
- (C) The vessel will possess a short rolling period
- (D) The vessel will possess negative stability

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

39. A tank which carries liquid is dangerous to the stability of a vessel when it is in which condition?

- (A) Slack
- (B) Completely full
- (C) Low in the vessel
- (D) Completely empty

*If choice A is selected set score to 1.*
40. What monitoring device best indicates the load being carried by a diesel engine?
   - (A) Jacket water temperature gauge
   - (B) Tachometer
   - (C) Lube oil pressure gauge
   - (D) Exhaust pyrometer

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

41. A fire starting by spontaneous combustion can be expected in which condition?
   - (A) Clean mattresses are stored in contact with an electric light bulb.
   - (B) Paints, varnish, or other liquid flammables are stowed in a dry stores locker.
   - (C) Oily rags are stowed in a metal pail.
   - (D) Inert cargoes such as pig iron are loaded in a wet condition.

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

42. What does a pyrometer measure on a diesel engine?
   - (A) Exhaust temperature
   - (B) Air box pressure
   - (C) Water temperature
   - (D) Water pressure

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

43. You are reading the draft marks as shown in illustration D032DG. The water level is about 4 inches below the bottom of 10. What is the draft?
   - (A) 10'-04"
   - (B) 10'-02"
   - (C) 9'-08"
   - (D) 9'-04"

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

44. By regulation, who is responsible to ensure that fall overboard prevention and recovery of persons in the water procedures are complied with on your towboat?
   - (A) The managing operator of the towboat
   - (B) The owner of the towboat
   - (C) The Master
   - (D) All of the above

   *If choice D is selected set score to 1.*
45. Which instrument may a towing vessel, engaged in towing exclusively on the Western Rivers, use in place of a magnetic compass?

- (A) A VHF Radio
- (B) Gyrocompass
- (C) GPS Receiver
- (D) Illuminated Swing Meter

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

46. Why do spaces containing batteries require good ventilation?

- (A) Ventilation supplies extra oxygen for charging the battery
- (B) Ventilation avoids flammable gas accumulation
- (C) Ventilation avoids CO2 build up
- (D) Less electrolyte is required to maintain the batteries’ charge

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

47. Which installed equipment on a towing vessel must be tested and logged when a new Master assumes command?

- (A) Internal communications, including sound-powered telephones
- (B) Vessel control alarms
- (C) Navigational lights and search lights
- (D) All of the above must be tested

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

48. A vessel behaves as if all of its weight is acting downward through the center of gravity, and all its support is acting upward through which point?

- (A) The keel
- (B) The tipping center
- (C) The center of buoyancy
- (D) The amidships center section

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

49. When the forward drafts and the after drafts are averaged, which of the following describes the result?

- (A) True mean draft
- (B) Mean of the calculated drafts
- (C) Mean draft
- (D) Draft at the center of flotation

*If choice C is selected set score to 1.*
50. Which of the following in the illustration is the bilge knuckle of a barge? Illustration WR003DG

- (A) C
- (B) D
- (C) K
- (D) L

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