

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

Correct answer: B

2. What is the name of the circular steel structure installed around the propeller (wheel) of a towboat?
- A. Kort nozzle
 - B. Strut
 - C. Shroud
 - D. Hood

Correct answer: A

3. If you must enter water on which there is an oil fire, which is the best action to take?
- A. Wear very light clothing
 - B. Protect your life preserver by holding it above your head
 - C. Enter the water on the windward side of the vessel
 - D. Keep both hands in front of your face to break the water surface when diving headfirst

Correct answer: C

4. Which of the following in the illustration is the headlog? Illustration WR003DG
- A. A
 - B. C
 - C. G
 - D. I

Correct answer: D

5. What is the distance between the bottom of the hull and the waterline called?
- A. Freeboard
 - B. Tonnage
 - C. Draft
 - D. Reserve buoyancy

Correct answer: C

6. Most medium and slow speed diesels are started by what medium?
- A. Compressed air
 - B. Electric starting motors
 - C. Ether
 - D. Hydraulics

Correct answer: A

7. Individuals who are not crewmembers onboard your towboat must receive a safety orientation prior to getting underway. Which topic is required to be covered by regulation in the orientation?
- A. Dock security measures
 - B. Advanced firefighting techniques and team firefighting
 - C. Look out duties
 - D. Methods to notify crewmembers in the event of an emergency

Correct answer: D

8. What is the purpose of a striker plate?
- A. Provides surface for applying force on machinery
 - B. Prevents valve stem over-travel
 - C. Absorbs machinery vibration
 - D. Provides landing surface for the sounding bob

Correct answer: D

9. On your towboat, if someone fell overboard and you did not know over which side the person fell, which action should you take?
- A. Increase speed to full to get the vessel away from the person
 - B. First put the rudder hard over in either direction
 - C. Immediately reverse the engines
 - D. Stop the propellers from turning and throw a ring buoy over the side

Correct answer: D

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

Correct answer: B

11. 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"

Correct answer: B

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

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

Correct answer: D

13. 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. Sound all tanks to ascertain which contain water
- B. Close all engine room doors to slow flooding
- C. Call the local Coast Guard office
- D. Put the boat in shallow water or on the bank

Correct answer: D

14. What is used as an indicator of initial stability?

- A. GZ
- B. KG
- C. GM
- D. KM

Correct answer: C

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

- A. Carbon dioxide
- B. Nitrogen
- C. Oxygen
- D. Sodium

Correct answer: C

16. What is the name of the void or opening when barge headlogs do not meet or are not even with one another?

- A. Spacing
- B. Notch
- C. Hole
- D. Gap

Correct answer: B

17. 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. Sound the "Abandon Ship" signal
- C. Instruct all crew members to don work vests
- D. Start the fire pumps

Correct answer: B

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

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

Correct answer: B

19. Who is responsible to ensure that all of the crew members receive instruction on reporting inoperative alarm systems and fire-detection systems?

- A. The Master of the towboat
- B. The Company Quality Assurance Assistant
- C. The crew members are responsible for their own training
- D. The Steersman

Correct answer: A

20. Which defines the function of a spark arrestor?

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

Correct answer: A

21. You are reading the draft marks as shown in illustration D032DG. The water level forward is at the top of the 8, and the water level aft is at the top of the 8. What is the mean draft?

- A. 8'06"
- B. 8'03"
- C. 8'00"
- D. 7'06"

Correct answer: A

22. A fire of escaping liquefied flammable gas is best extinguished by which action?

- A. Cooling the gas below the ignition point
- B. Cutting off the supply of oxygen
- C. Stopping the flow of gas
- D. Interrupting the chain reaction

Correct answer: C

23. Four-cycle diesel engines obtain combustion air through turbo chargers, blowers, or which other means?

- A. Thru carburetors
- B. By air receivers
- C. By natural aspiration
- D. Via air starters

Correct answer: C

24. Your towboat is pushing a loaded tank barge and has been involved in a collision with another vessel. Which is an indicator that the barge is damaged and sinking?

- A. The face and jockey wires are a little slack
- B. The barge takes on a list to starboard
- C. The barge appears to be riding higher out of the water
- D. Your boat's speed increases by 0.2 mph

Correct answer: B

25. Which is included in the term "Western Rivers," when it refers to regulations requiring towing vessels to carry navigational-safety equipment, charts or maps, and publications?

- A. Mississippi River and its tributaries
- B. Red River and the Old River
- C. Port Allen - Morgan City Alternate Route
- D. All of the above

Correct answer: D

26. How is the important stability parameter, KG, defined?

- A. The metacentric height
- B. The height of the center of buoyancy above the keel
- C. The height of the center of gravity above the keel
- D. The height of the metacenter above the keel

Correct answer: C

27. Which towing vessel(s) is/are exempt from carrying radar?

- A. A vessel used solely for pollution response or assistance towing.
- B. A vessel used solely in a limited area, such as a barge fleeting area.
- C. A vessel exempted, in writing, by the Captain of the Port.
- D. All of the above

Correct answer: D

28. The owner or Master of a towing vessel shall ensure that all tests and inspections of gear are conducted. Which is TRUE concerning the tests or inspections of the gear?
- A. Gear tests and inspections shall be conducted weekly, before 0000 Sunday
 - B. Inspections and tests will be conducted during each watch, immediately before being relieved
 - C. Gear tests and inspections will be conducted before embarking on a voyage of more than 24 hours
 - D. Gear tests and inspections shall be conducted daily, at 1200 local zone time

Correct answer: C

29. Which item is the towknee on a towboat? Illustration WR002DGDeck

- A. G
- B. K
- C. P
- D. Q

Correct answer: D

30. On which route is a towing vessel over 39.4 feet in length NOT required to carry an echo-sounding device?
- A. Inland Waters, other than the Western Rivers
 - B. Coastwise Routes
 - C. Great Lakes
 - D. Western Rivers

Correct answer: D

31. Which of the following in the illustration is the Kort Nozzle on a towboat? Illustration WR002DG

- A. D
- B. J
- C. R
- D. U

Correct answer: B

32. What are the three most common basic types of diesel engine starters?

- A. Metered, hydraulic, automatic
- B. Air, hydraulic, electric
- C. Air, water, electric
- D. Air, emergency, hydraulic

Correct answer: B

33. A fire starts on your towboat while refueling. Which action should you take FIRST?

- A. Sound the general alarm
- B. Attempt to extinguish the fire
- C. Determine the source of the fire
- D. Stop the ventilation

Correct answer: A

34. 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. Weekly, before 2400 Saturday
 - C. Immediately after assuming the watch
 - D. Daily, at 0800 local zone time

Correct answer: A

35. Your towboat is equipped with a fire detection system. If the system detects a fire in the engine room what will automatically happen?
- A. The system will shut down the main engines and activate the general alarm
 - B. The system will automatically start the fire pumps
 - C. The system will set off alarms on a control panel at the operating station
 - D. The system will automatically release CO2 into the machinery space

Correct answer: C

36. What would light gray smoke from a diesel engine probably indicate?
- A. High compression temperature
 - B. Excess combustion air
 - C. Excessive lube oil consumption
 - D. Overload condition

Correct answer: D

37. Which term defines the upward pressure of displaced water of a vessel?
- A. Buoyancy
 - B. Draft
 - C. Deadweight
 - D. Freeboard

Correct answer: A

38. Which color of rockets, shells, or rocket parachute flares are used to indicate that the vessel is in distress and requires immediate assistance?
- A. Red
 - B. Yellow
 - C. Green
 - D. White

Correct answer: A

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

Correct answer: D

40. Towboats regularly navigating the Ohio and Mississippi rivers above Cairo, Illinois, and their tributaries, shall at all times have on board a copy of which publication?

- A. U.S. Army Corps of Engineers Navigation Regulations (Blue Book)
- B. Tide Tables
- C. U.S. Coast Pilot
- D. Sailing Directions

Correct answer: A

41. 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"

Correct answer: C

42. What power source actuates a solenoid valve?

- A. Mechanical force
- B. Hydraulic pressure
- C. Air pressure
- D. Electric current

Correct answer: D

43. When a new crew member arrives aboard your towboat he/she is required to receive a safety orientation. Which is a topic required by regulation to be addressed in the orientation?

- A. Emergency egress procedures
- B. A Background Security questionnaire
- C. Company Human Resource Policies
- D. Advanced First Aid

Correct answer: A

44. Which navigational equipment is required to be tested and logged before a towing vessel embarks on a voyage of more than 24 hours?

- A. GPS receiver(s)
- B. Compass and/or swing meter
- C. Radar(s) and VHF radio(s)
- D. All required navigational equipment, without exception

Correct answer: D

45. 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?

- A. Within 24 hours of reporting for duty
- B. Prior to reporting aboard the towboat
- C. Within the first week of reporting aboard
- D. Within the first month of reporting aboard

Correct answer: A

46. If ignited, which material would be a class B fire?

- A. Paper
- B. Magnesium
- C. Wood
- D. Diesel Oil

Correct answer: D

47. After extinguishing a paint locker fire using the fixed CO2 system, which is the next action that should be taken to the space?

- A. Check the oxygen content of the space
- B. Open the space and all burned material removed
- C. Keep the space closed with vents off until all boundaries are cool
- D. Douse the space with water to prevent reflash

Correct answer: C

48. Which instrument may a towing vessel, engaged in towing exclusively on the Western Rivers, use in place of a magnetic compass?

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

Correct answer: D

49. Which item in the illustration is the point where the thrust of the towboat is transferred to the barges?

Illustration WR002DG

- A. J
- B. Q
- C. R
- D. S

Correct answer: B

50. Which is TRUE concerning the stowage of life jackets?

- A. They are required to be stowed in a central location
- B. They are always locked in watertight containers
- C. They are required to be stowed in messrooms
- D. They must be stowed in readily accessible locations

Correct answer: D

D032DG

12

11

10

9

8

7

**AFT DRAFT
MARKS**

12

11

10

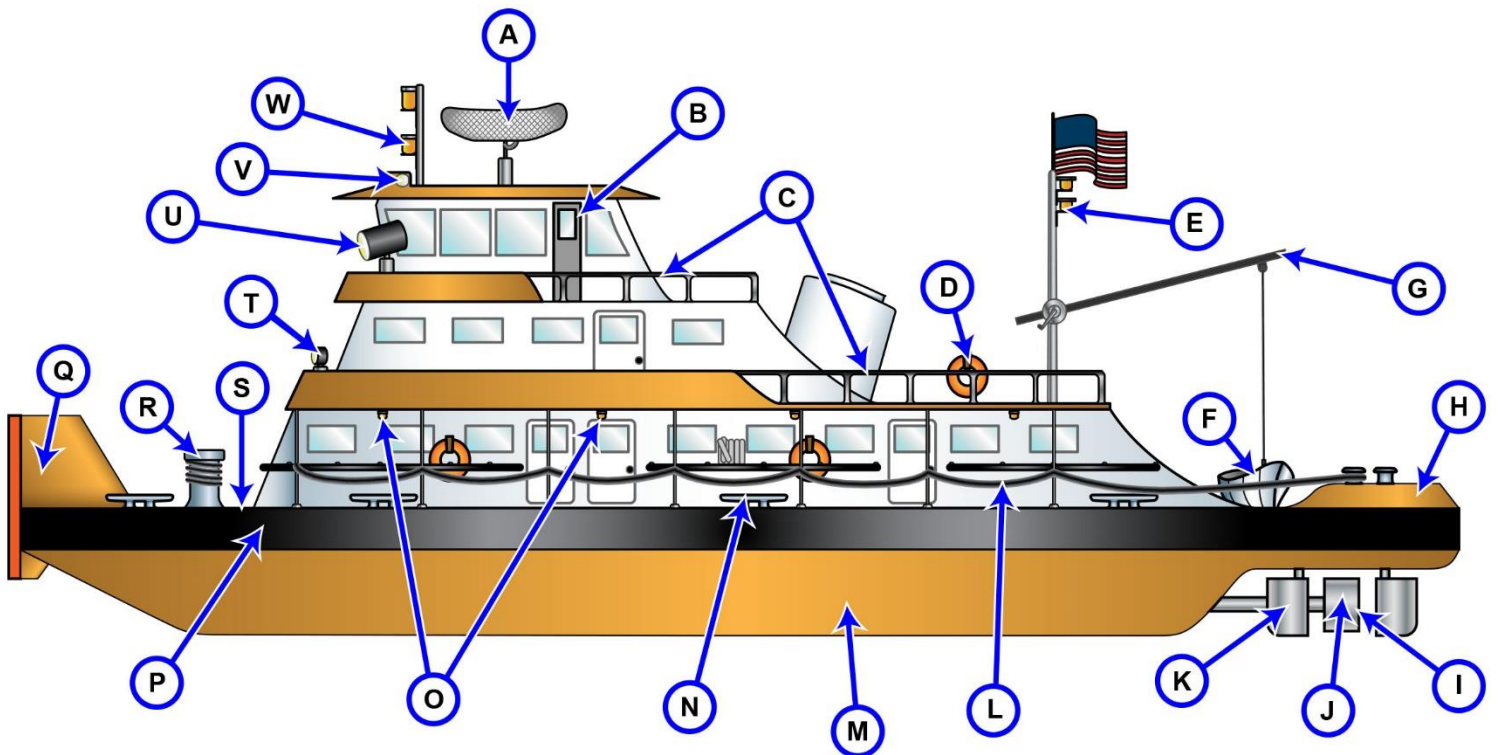
9

8

7

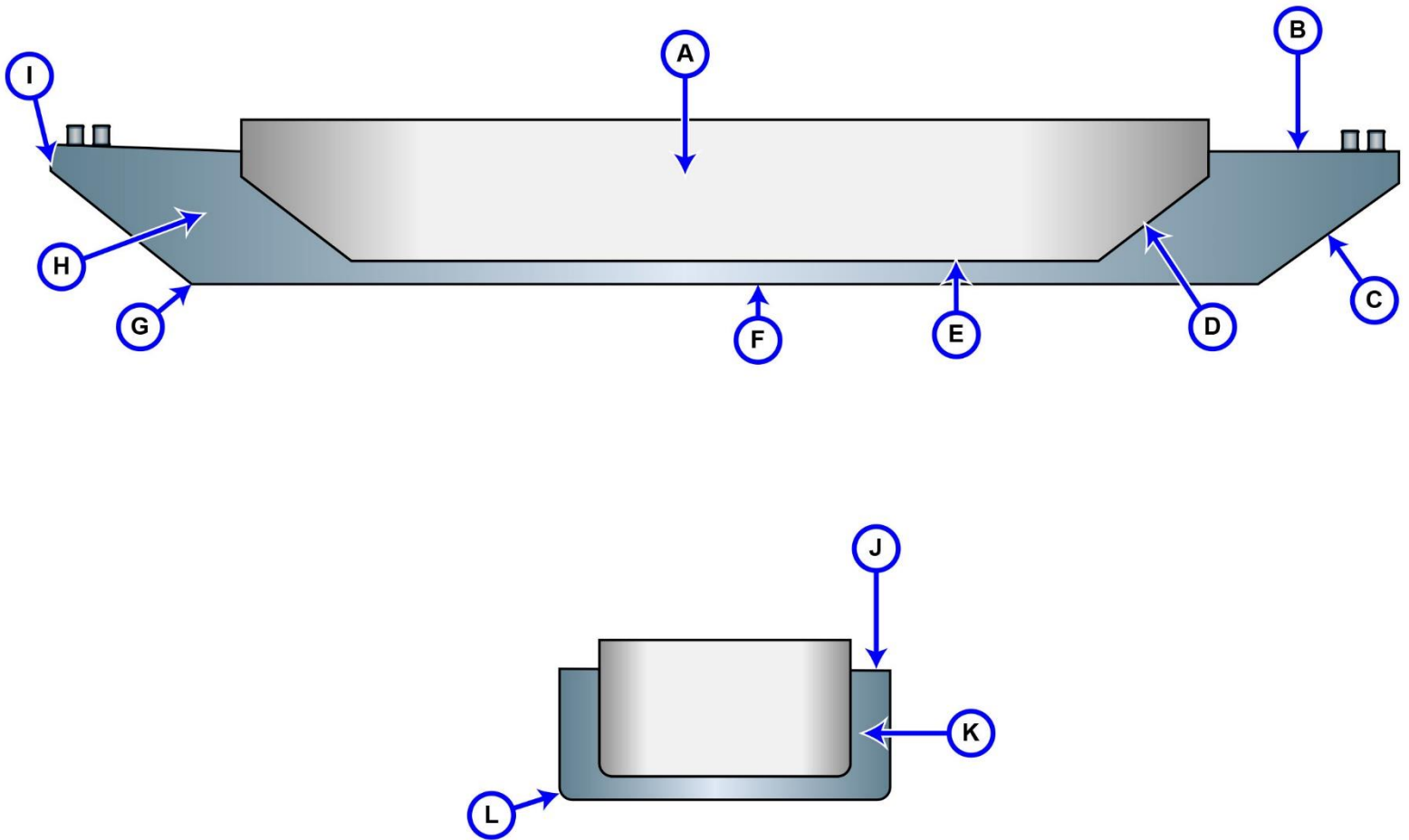
**FWD DRAFT
MARKS**

WR002DG



Adapted for testing purposes only from The Deckhand's Manual
Copyright © 1961 by Kenneth Finefield
Further reproduction prohibited without permission

WR003DG



Adapted for testing purposes only from The Deckhand's Manual
Copyright © 1961 by Kenneth Finefield
Further reproduction prohibited without permission