

## U.S.C.G. Merchant Marine Exam

### Apprentice Mate Steersman

#### Q410 Deck General

#### (Sample Examination)

Choose the best answer to the following Multiple Choice Questions.

1. You are the credentialed Master of a 199 GT uninspected towing vessel making a 500 mile coastwise trip. You carry a deck crew of six (6). Which statement is TRUE?
- (A) There must be at least 5 able seamen among the deck crew.
  - (B) There must be 3 separate watches stood.
  - (C) Only the able seamen require Merchant Mariner Credentials.
  - (D) None of the above

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

2. How many months after its expiration date may a Coast Guard credential be renewed without retaking the complete exam?
- (A) 1 month
  - (B) 6 months
  - (C) 12 months
  - (D) 24 months

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

3. While towing, bridle legs of unequal lengths may cause \_\_\_\_\_.
- (A) a bent swivel
  - (B) the bridle to foul
  - (C) the shorter leg to fail
  - (D) chafing on the fairlead or bitts

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

4. Which is part of the ground tackle?
- (A) Devil's claw
  - (B) Gooseneck
  - (C) Charlie noble
  - (D) Rat's tail

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

5. Your vessel is broken down and rolling in heavy seas. You can reduce the danger of capsizing by \_\_\_\_\_.
- (A) moving all passengers to the stern
  - (B) moving all passengers to one side of the boat
  - (C) rigging a sea anchor
  - (D) constantly shifting the rudder

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

6. One advantage of chain over wire rope for a tow bridle is that chain \_\_\_\_\_.

- (A) is better suited for inland towing
- (B) equalizes towing forces better
- (C) handles more easily
- (D) resists damage from chafing

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

7. "Hanging a barge off" means to \_\_\_\_\_.

- (A) remove a barge while locking through
- (B) moor a barge to the bank and leave
- (C) tow an empty barge astern
- (D) remove and deliver a loaded barge from a multiple tow

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

8. If you have a liquefied flammable gas barge in tow, which is NOT required of you with respect to the barge and its cargo?

- (A) Have a properly certificated tankerman or at least one credentialed officer on board the towing vessel.
- (B) Make periodic inspections of bilges.
- (C) Keep the barge under constant surveillance.
- (D) Verify ullage readings.

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

9. You are a watchstanding mate and have come to the bridge to relieve the watch. After reviewing the chart and having been briefed by the off-going mate, you are now ready to effect the relief. The watch is officially transferred to you after \_\_\_\_\_.

- (A) the mate being relieved says, "You have the conn" and you state the ship's course
- (B) you say, "I relieve you" and you state the course per gyro and magnetic compasses
- (C) the mate being relieved tells you the vessel's course and speed and states that you have the watch
- (D) you state the vessel's charted position, present course and port of destination

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

**10.** A sufficient amount of chain must be veered when anchoring a vessel to ensure \_\_\_\_\_.

- (A) there is more chain out than there is in the chain locker
- (B) the vessel has enough room to swing while at anchor
- (C) there is a sufficient scope of chain to keep the anchor on the bottom
- (D) the anchor flukes bite into the ocean bottom

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

**11.** Once a vessel has loaded packaged hazardous cargo, the cargo spaces shall be inspected. The spaces shall also be inspected at least once in every 24 hours. The only exception to daily inspection is when \_\_\_\_\_.

- (A) there is sufficient fire protection located on the main deck adjacent to the cargo hatch
- (B) a vessel is equipped with an automatic smoke or fire detecting system
- (C) the cargo hatches are of steel construction
- (D) the cargo is of a nonflammable type

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

**12.** A Chinese stopper (two lines) will hold best when you \_\_\_\_\_.

- (A) twist the ends together and hold them at right angles to the mooring line
- (B) twist the ends together and hold them in the direction opposite to the pull
- (C) fasten the bitter ends to the mooring line with half hitches
- (D) twist the ends together and hold them in the direction of the pull

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

**13.** Leeway is the \_\_\_\_\_.

- (A) difference between the true course and the compass course
- (B) lateral movement of a vessel downwind of her intended course
- (C) displacement of a vessel multiplied by her speed
- (D) momentum of a vessel after her engines have been stopped

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

**14.** Which will most likely occur when entering shallow water?

- (A) The vessel's trim will change.
- (B) An increase in speed will occur.
- (C) The vessel's list will change.
- (D) Rudder action will become more effective.

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

**15.** What is the minimum number of B-II hand portable fire extinguishers required on board a 105 GT uninspected towboat with a 7500 B.H.P. plant (including the machinery space)?

- (A) 6
- (B) 8
- (C) 9
- (D) 11

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

**16.** Which effect does speed through the water have on a vessel which is underway in shallow water?

- (A) A decrease in the speed results in a decrease in steering response and maneuverability.
- (B) A decrease in speed results in the vessel sucking down on an even plane.
- (C) An increase in speed results in the stern sucking down lower than the bow.
- (D) An increase in speed results in the vessel rising on an even plane.

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

**17.** You are on a vessel designed to carry compressed gasses in bulk with a cargo of butadiene. Which statement is TRUE?

- (A) Silver and copper are prohibited in the parts of valves and fittings in contact with the cargo.
- (B) The shipping document must specify the exact quantity of butadiene being carried.
- (C) The cargo tank may be sampled only when the tank is being filled.
- (D) The ullage must be padded with compressed air at a minimum pressure of 2 psig.

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

**18.** What is a grapnel?

- (A) device for securing a chain topping lift
- (B) type of clam bucket used for discharging bulk cargo
- (C) hook to prevent the anchor cable from slipping
- (D) device used to drag for a submerged cable or line

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

**19.** When instructing a crew member concerning the right way to lift a weight, you would instruct him to \_\_\_\_\_.

- (A) bend his back and stoop with arms straight
- (B) arch the back to add strength to the muscles
- (C) bend his back and stoop
- (D) bend his knees and lift with his legs

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

**20.** When anchoring a vessel, it is best to release the anchor when \_\_\_\_\_.

- (A) going full ahead
- (B) going slow astern
- (C) dead in the water
- (D) going full astern

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

**21.** As a rule, ships of most configurations, when drifting in calm water with negligible current, will lie \_\_\_\_\_.

- (A) stern to the wind
- (B) beam to the wind
- (C) with the wind on the quarter
- (D) bow to the wind

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

**22.** Which statement is TRUE about the use of a "gob rope"?

- (A) The gob rope is a rope used in mooring a vessel to a buoy.
- (B) The gob rope is a line hung over a vessel's side to assist in boarding.
- (C) The gob rope is used to secure the towline aft over the centerline of a tug..
- (D) The gob rope is a mooring line for tying up lighters for working cargo alongside a vessel anchored in an open roadstead.

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

**23.** To coil a left-hand laid rope, you should coil the line in \_\_\_\_\_.

- (A) either a clockwise or a counterclockwise direction
- (B) a counterclockwise direction only
- (C) an alternating clockwise and counterclockwise direction
- (D) a clockwise direction only

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

**24.** Camphor oil is classified as a \_\_\_\_\_.

- (A) Grade A flammable liquid
- (B) Grade C flammable liquid
- (C) Grade D combustible liquid
- (D) Grade E combustible liquid

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

**25.** The standing part of a tackle is \_\_\_\_\_.

- (A) the hook that engages the weight to be moved
- (B) that part to which power is applied
- (C) all the fall except the hauling part
- (D) that part of the falls made fast to one of the blocks

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

**26.** You are docking a vessel. If possible, you should \_\_\_\_\_.

- (A) go in against the current
- (B) approach the dock at a 90° angle and swing to
- (C) pass a mooring line to the dock with a heaving line and let the crew pull the vessel in
- (D) go in with the current

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

**27.** You are the Master of a single-screw vessel. You are docking at a port which has no tugs available. You decide to drop the offshore anchor to help in docking. The amount of chain you should pay out is \_\_\_\_\_.

- (A) equal to the depth of the water
- (B) 1 1/2 to 2 times the depth of the water
- (C) 5 to 7 times the depth of the water
- (D) you should NEVER use the anchor to help in docking

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

**28.** After casting off moorings at a mooring buoy in calm weather, you should \_\_\_\_\_.

- (A) go half ahead on the engines and put the rudder hard right
- (B) back away a few lengths to clear the buoy and then go ahead on the engines
- (C) go full ahead on the engine(s)
- (D) go half ahead on the engines and pass upstream of the buoy

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

**29.** You are anchoring in a river where the current is from one direction only. The best way to lay out two anchors is to have them \_\_\_\_\_.

- (A) so that their lines form an angle
- (B) directly in line with the bow
- (C) on top of one another
- (D) side by side, with their lines on the port and starboard side

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

**30.** When inspecting ground tackle, fractures are most frequently found in the \_\_\_\_\_.

- (A) end links
- (B) fluke
- (C) swivel
- (D) anchor shank

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

**31.** In order to reduce your wake in a narrow channel you should \_\_\_\_\_.

- (A) apply enough rudder to counter the effect of the current
- (B) reduce your speed
- (C) shift the weight to the stern
- (D) change your course to a zigzag course

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

**32.** You attach a line to a stationary barge lying off your starboard beam in order to maneuver it into position to make up tow. The line used to do this is a \_\_\_\_\_.

- (A) swing line
- (B) fore and aft line
- (C) jockey line
- (D) check line

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

**33.** When making way in heavy seas you notice that your vessel's screw is being lifted clear of the water and racing. One way to correct this would be to \_\_\_\_\_.

- (A) move more weight forward
- (B) increase speed
- (C) shift the rudder back and forth several times
- (D) decrease speed

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

**34.** "Ice blink" is \_\_\_\_\_.

- (A) "water sky"
- (B) the yellowish-white glare on the underside of a cloud layer
- (C) the dark appearance of the underside of a cloud layer due to reflection of a surface of open water
- (D) the soft light appearance on the underside of a cloud layer due to reflection from a surface of open water

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

**35.** An icebreaker assisting a vessel through an ice field would display a visual signal consisting of the code letter "I" (India) to signify that "\_\_\_\_\_".

- (A) I am altering my course to starboard
- (B) I am operating astern propulsion
- (C) I am altering my course to port
- (D) My vessel is stopped and making no way through the water

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

**36.** In illustration D024DG below, which item refers to the facewire?

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

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

**37.** For operations in pack ice, a vessel should \_\_\_\_\_.

- (A) be on an even keel
- (B) be ballasted so the forefoot is near the surface
- (C) have a drag of not more than 2 to 3 feet
- (D) be trimmed slightly by the head

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

**38.** A tow consists of 8 barges: 6 jumbo barges made up 3 abreast and 2 long, with 2 standard barges abreast as lead barges. How long is this tow?

- (A) 525 feet
- (B) 545 feet
- (C) 565 feet
- (D) 595 feet

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

**39.** In illustration D024DG below what does item "A" represent?

- (A) scissor wire
- (B) drag wire
- (C) lashing
- (D) tandem wire

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

**40.** Which factor(s) might indicate that a towline should be removed from service?

- (A) A surface condition of corrosion and discoloration.
- (B) Visible damage to the towline, including fishhooks.
- (C) Measurements showing a decrease in diameter.
- (D) All of the above

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

**41.** What does "end for end" mean in regard to a towing hawser?

- (A) To take the kinks out of the hawser
- (B) To fake it down in figure eights
- (C) To increase the catenary
- (D) To swap ends of the hawser to minimize wear

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

**42.** The effect of excessive catenary in shallow water may be \_\_\_\_\_.

- (A) slowing, stopping or endangering the towing operation by placing the tug in irons
- (B) dragging the towing hawser along the bottom and chafing it
- (C) snagging sunken or submerged objects
- (D) All of the above

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

**43.** What could be used as fairleads on a towed vessel?

- (A) Roller chocks
- (B) Chocks
- (C) Double bits
- (D) All of the above

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

**44.** To lead the towing hawser over the center of the stern when not under a strain you could \_\_\_\_\_.

- (A) lead it through the Norman pins
- (B) hold it in the median position by a gob rope
- (C) fairlead it through a stern roller chock
- (D) All of the above when so equipped

*If choice D is selected set score to 1*

**45.** What is the effect of releasing the towline in a tripping situation?

- (A) There is no effect other than relief.
- (B) It disconnects the capsizing force and allows the tug to recover from its list.
- (C) Yawing
- (D) It frees the tug from its towing responsibilities.

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

**46.** The MINIMUM acceptable size for a towing bridle would be that size in which the safe working load (SWL) of each leg of the bridle is equal to \_\_\_\_\_.

- (A) one-half the SWL of the main towing hawser
- (B) three-fourths the SWL of the main towing hawser
- (C) twice that of the main towing hawser
- (D) that of the main towing hawser

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

**47.** To what chemical family does chlorallylene belong?

- (A) Substituted allyl
- (B) Alcohols
- (C) Esters
- (D) Glycol ethers

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

**48.** Which product(s) is(are) compatible with the product ethylene cyanohydrin?

- (A) Sulfuric acid
- (B) Nitric acid
- (C) Ammonia
- (D) Isocyanates

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

**49.** Regulations require that venting for cargo tanks in which only grades D or E liquids are to be transported shall, as a MINIMUM, be of which type? (tank barge constructed on or after July 1, 1951)

- (A) Gooseneck vents and flame screens
- (B) Branch vent lines connected to a vent header system
- (C) Straight vents open to atmosphere
- (D) Individual pressure vacuum relief valves

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

**50.** During cargo transfer on an unmanned tank barge, how many portable fire extinguishers are required in the cargo tank area, if the barge has no cargo pumps of her own?

- (A) One
- (B) Two
- (C) Three
- (D) None

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

**51.** You are towing a 1,000 GT gasoline tank barge which is not gas free. By regulation, cargo tank hatches, ullage holes, and Butterworth plates on the barge may \_\_\_\_\_.

- (A) not be open without flame screens under any circumstances
- (B) be open without flame screens in good weather from 16 May to 15 September
- (C) be open without flame screens under the supervision of the senior crew member on duty
- (D) be open without flame screens when the barge is empty

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

**52.** Your tow includes a loaded chlorine barge. After inspecting the tow, the mate reports that he hears a hissing sound coming from the safety valves. Where will you find information on emergency procedures concerning the uncontrolled release of cargo?

- (A) Dangerous Cargo Regulations
- (B) Cargo Information Card on your towboat
- (C) Cargo Manifest or loading paper
- (D) Barge's Certificate of Inspection

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

**53.** The Certificate of Freeboard is the \_\_\_\_\_.

- (A) Load Line Certificate
- (B) Admeasurer's Certificate
- (C) Forecastle Card
- (D) Certificate of Inspection

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

**54.** Fire protection regulations for towing vessels require training in all of the following, EXCEPT \_\_\_\_\_.

- (A) activating the general alarm and reporting inoperative alarm systems and fire-detection systems
- (B) donning a self-contained breathing apparatus, if the vessel is so equipped
- (C) refilling and servicing all expended fire extinguishing equipment
- (D) putting on a fireman's outfit, if the vessel is so equipped

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

**55.** Fire protection regulations for towing vessels allow you to use a nonmetallic flexible hose in fuel line installations under all of the following conditions EXCEPT when \_\_\_\_\_.

- (A) used in lengths of not more than 30 inches
- (B) fitted with Coast Guard approved garden hose fittings
- (C) reinforced with wire braid
- (D) visible and easily accessible

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

**56.** Fire protection regulations for towing vessels require that drills be conducted on board the vessel as if there were an actual emergency. Drills include all of the following, EXCEPT \_\_\_\_\_.

- (A) testing all alarm and detection systems
- (B) participation by selected crew members
- (C) one person putting on protective clothing, if the vessel is so equipped
- (D) breaking out and using the vessel's emergency equipment

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

**57.** On uninspected vessels which statement is TRUE concerning work vests?

- (A) They need not be of an approved type.
- (B) They must be stowed separately from approved life preservers.
- (C) They may be worn during drills.
- (D) They may be substituted for up to 10% of the required lifesaving gear aboard.

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

**58.** On uninspected vessels when may U. S. Coast Guard approved work vests may be substituted life jackets?

- (A) aboard sailing vessels
- (B) aboard towing vessels
- (C) under no circumstances
- (D) aboard work vessels

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

**59.** Which personal lifesaving device(s) is(are) approved for use on an uninspected towboat 150 feet in length?

- (A) Life preserver
- (B) Buoyant vest or cushion
- (C) Special purpose safety device
- (D) All of the above

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

**60.** According to U.S. regulations, which of the following describes the declaration of inspection?

- (A) paper issued by the Coast Guard marine inspector which allows you to conduct a transfer operation
- (B) application you must complete and submit to the Coast Guard to have an inspector visit your vessel
- (C) document signed by vessel and shore facility persons-in-charge declaring that all transfer requirements have been met
- (D) annual report submitted by vessel personnel to the Coast Guard declaring that all transfer equipment has been inspected

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

**61.** What shall the transfer procedures required to be followed on tankships contain?

- (A) a line diagram of the vessel transfer piping
- (B) the duties by name of each person in charge required for each transfer operation
- (C) a list of each port of discharge
- (D) a current crew list

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

**62.** Fuel for use on a vessel (300 GT or more constructed before July 1, 1974) may be carried in independent tanks forward of a collision bulkhead if the \_\_\_\_\_.

- (A) tanks were designated, installed, or constructed for fuel oil carrying before July 1, 1974
- (B) shell of the tank is of the same thickness or greater than that of the vessel's hull
- (C) fuel has a flash point above 180°F
- (D) tank is 18 inches inboard of the hull structure

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

**63.** You are at sea and not in a special area as defined in ANNEX V of MARPOL. How many nautical miles from land must you be to discharge ground garbage that will pass through a one-inch (25 mm) screen into the sea?

- (A) 3 nm
- (B) 25 nm
- (C) 6 nm
- (D) 12 nm

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

**64.** Providing you are not sailing in the Red Sea or another special area as listed in ANNEX V of MARPOL, how many miles from land must you be to throw garbage including bottles, rags, and glass that has not been ground up into the sea?

- (A) 3 nm
- (B) 6 nm
- (C) 12 nm
- (D) 25 nm

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

**65.** A vessel arrives at the port of San Francisco from Yokohama, Japan. The passengers fill out the Baggage Declaration and Entry form. A passenger has baggage arriving on another vessel. How must this baggage be handled for U.S. Customs purposes?

- (A) It need not be declared at this time.
- (B) It must be declared on the same form and marked "Unaccompanied Baggage".
- (C) It must be declared on another form entitled "Continuation Sheet".
- (D) It must be declared only if the other vessel's name is known.

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

**66.** A vessel loads 5000 tons of manganese ore. The railroad cars that brought the ore to the vessel were previously loaded with iron ore so the ore is contaminated. The agent requests the Master to sign a Clean Bill of Lading and in return the shipper will give him a Letter of Indemnity. What is the best procedure to follow?

- (A) Refuse to sign a Clean Bill of Lading.
- (B) Sign a Clean Bill of Lading and accept the Letter of Indemnity.
- (C) Sign the Clean Bill of Lading and have the agent countersign it.
- (D) Sign a Clean Bill of lading under protest.

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

**67.** While assigned to a 106 GRT vessel, you are required to sign "foreign" articles on a voyage from San Francisco to which port?

- (A) Mazatlan, Mexico (west coast)
- (B) New York, NY
- (C) Vancouver, Canada (west coast)
- (D) Vera Cruz, Mexico (east coast)

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

**68.** You are the credentialed Master of a 100 GT towing vessel sailing coastwise. What percentage of the deck crew must be able to understand any order spoken by the officers?

- (A) 50%
- (B) 65%
- (C) 75%
- (D) 100%

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

**69.** You are in port A in the United States, and your Certificate of Inspection has expired. You wish to go to port B in the United States for repairs and to complete the inspection. If the Officer-in-Charge Marine Inspection deems it safe, he may issue a \_\_\_\_\_.

- (A) Certificate of Seaworthiness
- (B) Limited Certificate of Inspection
- (C) Temporary Certificate of Inspection
- (D) Permit to Proceed

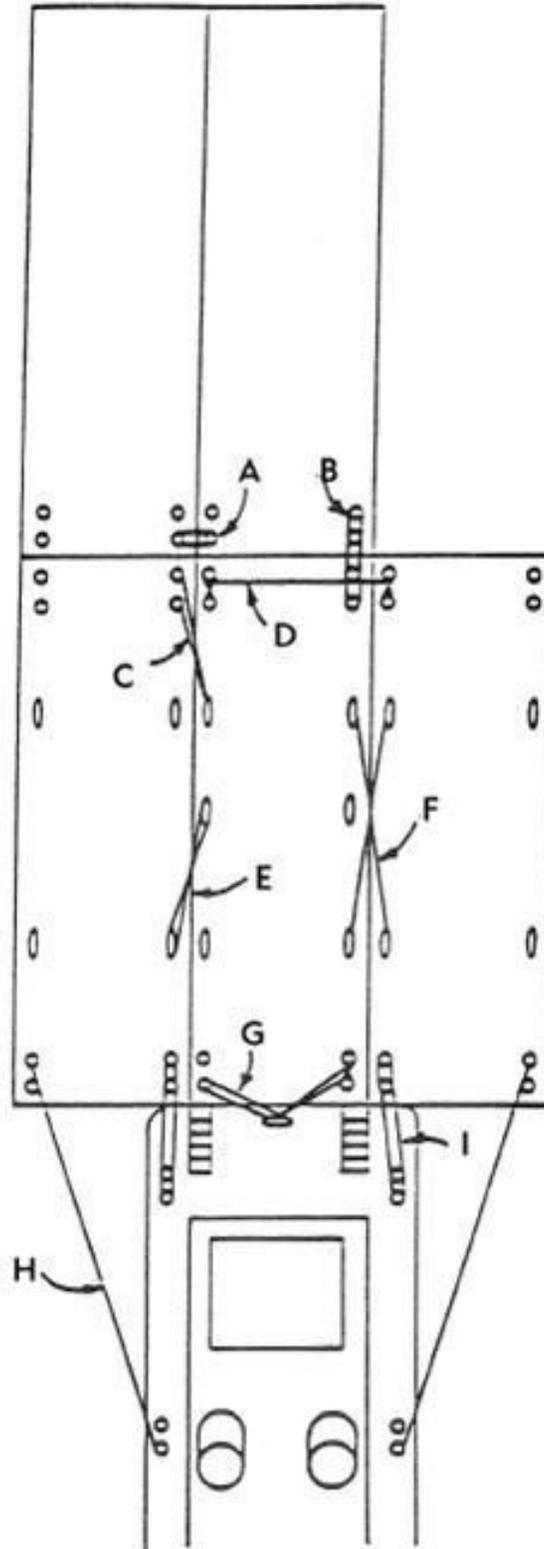
*If choice B is selected set score to 1.*

**70.** The number of able seamen required on board is stated in the \_\_\_\_\_.

- (A) Certificate of Inspection
- (B) Classification Certificate
- (C) SOLAS Certificate
- (D) American Bureau of Shipping code

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

## D024DG



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