

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

OUPV to Master Less than 100 Gross Registered Tons  
Great Lakes and Inland

Q352 Navigation and Deck General - Safety

(Sample Examination)

**Choose the best answer to the following Multiple Choice Questions:**

1. What is the name of tackle number 11 as shown in illustration D029DG below?

- (A) Three-two purchase
- (B) Gun tackle
- (C) Topping lift
- (D) Double luff tackle

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

2. Which is the proper name given to a block that can be opened at the hook or shackle end to receive a bight of the line?

- (A) Bight block
- (B) Snatch block
- (C) Gin block
- (D) Heel block

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

3. What is meant by the term "two-blocked"?

- (A) The line has jumped the sheaves.
- (B) You have two blocks.
- (C) The bottom block touches the top block.
- (D) There are turns in the fall.

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

4. What causes deviation in a magnetic compass?

- (A) A nearby magnetic land mass or mineral deposits
- (B) The changes in the earth's magnetic field
- (C) The magnetic influence inherent to that particular vessel
- (D) The magnetic lines of force not coinciding with the lines of longitude

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

5. The chart indicates the variation was 3°45'W in 1988, and the annual change is decreasing 6'. If you use the chart in 1991 how much variation should you apply?

- (A) 3°27'W
- (B) 3°27'E
- (C) 4°03'W
- (D) 4°03'E

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

**6.** A magnetic compass card is marked in how many degrees?

- (A) 90
- (B) 180
- (C) 360
- (D) 400

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

**7.** As a vessel changes course to starboard, which is TRUE concerning the compass card in a magnetic compass?

- (A) It first turns to starboard then counterclockwise to port
- (B) The card also turns to starboard
- (C) The card turns counterclockwise to port
- (D) The card remains aligned with compass north

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

**8.** Which is the BEST method of determining if a vessel is dragging anchor?

- (A) Observe changes in bearings of fixed objects onshore
- (B) Note any change in the tautness of the anchor chain
- (C) Observe how much the vessel sheers while at anchor
- (D) Observe the amount of line paid out

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

**9.** What provides little or no indication that a vessel is dragging anchor?

- (A) Drift lead with the line leading perpendicular to the centerline
- (B) Vibrations felt by placing a hand on the anchor cable
- (C) Increasing radar range to a fixed object ahead
- (D) Changing bearings to distant fixed objects abeam

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

**10.** Why must a sufficient amount of chain be veered when anchoring a vessel?

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

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

**11.** What is a major consideration when determining the scope of anchor line to pay out when anchoring a small boat?

- (A) The charted depth of water only
- (B) The depth of water, including tidal differences
- (C) The type of line being used for the anchor rope
- (D) The type of anchor being used

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

**12.** When using the term "limber system" one is referring to which system?

- (A) A weight reduction system
- (B) A drainage system
- (C) A strengthening system
- (D) A cleaning system

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

**13.** Which term refers to a transverse curvature of the deck?

- (A) Freeboard
- (B) Deadrise
- (C) Flare
- (D) Camber

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

**14.** A vessel's "quarter" is that section which is \_\_\_\_\_.

- (A) abeam
- (B) just aft of the bow
- (C) dead astern
- (D) on either side of the stern

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

**15.** What term indicates the outward curvature of the hull above the waterline?

- (A) Tumble home
- (B) Deadrise
- (C) Flare
- (D) Sheer

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

**16.** A long ton is \_\_\_\_\_.

- (A) 1,000 pounds
- (B) 2,000 pounds
- (C) 2,240 pounds
- (D) 2,400 pounds

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

**17.** 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 tipping center
- (B) The keel
- (C) The amidships center section
- (D) The center of buoyancy

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

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

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

**19.** The effect of free surface on initial stability depends upon which item(s)?

- (A) Only the length of the compartment
- (B) The amount of liquid in the compartment
- (C) The vertical position of the liquid in the vessel
- (D) The dimensions of the liquid surface and the vessel's displacement

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

**20.** If your vessel will list with equal readiness to either side, the list is most likely caused by which condition?

- (A) Negative GM
- (B) Pocketing of free surface
- (C) Off center weight
- (D) Excessive freeboard

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

**21.** What is Metacentric height a measure of?

- (A) Maximum righting arm
- (B) Stability through all angles
- (C) Initial stability only
- (D) Location of G above the keel

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

**22.** When the height of the metacenter is less than the height of the center of gravity of a vessel, the upright equilibrium position is referred to by which term?

- (A) Unstable Equilibrium
- (B) Neutral Equilibrium
- (C) Positive Equilibrium
- (D) Stable Equilibrium

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

**23.** When a wind force causes a vessel to heel to a static angle, the \_\_\_\_\_.

- (A) center of buoyancy remains the same
- (B) deck-edge immersion occurs
- (C) centers of buoyancy and gravity are in the same vertical line
- (D) righting moment equals the wind-heeling moment

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

**24.** Which of the following defines "Rolling Period"?

- (A) The time it takes the vessel to make a complete roll such as from port and return to level
- (B) The time it takes the vessel to make a complete roll such as from port to starboard and back to port
- (C) The time it takes the vessel to make a complete roll such as from level to starboard and return to port
- (D) The time it takes the vessel to make a complete roll such as from port to starboard and return to level

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

**25.** Longitudinal moment is obtained by multiplying a vessel's weight and which other component?

- (A) LCB
- (B) VCG or KG
- (C) LCG
- (D) TCG

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

**26.** All personnel on board a vessel should be familiar with the rescue boat's \_\_\_\_\_.

- (A) fuel consumption rates
- (B) boarding and operating procedure
- (C) maintenance schedules
- (D) navigational systems

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

**27.** Fixed CO<sub>2</sub> systems would not be used on crew's quarters or at which other location?

- (A) Spaces open to the atmosphere
- (B) The paint locker
- (C) Cargo holds
- (D) The engine room

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

**28.** Which is one of the limitations of foam as an extinguishing agent?

- (A) Foam conducts electricity
- (B) Foam cannot be made with salt water
- (C) Foam is heavier than oil and sinks below its surface
- (D) Foam is corrosive to all steel surfaces and is hazardous to firefighters

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

**29.** When discharging a portable CO<sub>2</sub> fire extinguisher, why must you grasp the hose handle and NOT the discharge horn?

- (A) The discharge horn becomes extremely hot
- (B) The horn could come off in your hands
- (C) The discharge horn becomes extremely cold
- (D) The horn is placed directly in the flames

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

**30.** Which is the most effective extinguishing action of dry chemical extinguisher?

- (A) Shielding of radiant heat
- (B) Breaking the chain reaction
- (C) Smothering
- (D) The CO<sub>2</sub> that is formed by heat

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

**31.** Which extinguishing agent will cool down a heated bulkhead in the least amount of time?

- (A) Water stream
- (B) Dry chemical
- (C) Water fog or spray
- (D) Steam

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

**32.** If your vessel is required to have a fire ax on board, where should it be located? (small passenger vessel regulations)

- (A) In or adjacent to the primary operating station
- (B) Just outside the engine room access
- (C) In the galley near the stove
- (D) In below-decks passenger accommodations

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

**33.** Which portable fire extinguisher is required just outside the exit of the propulsion machinery space of a 75-ton passenger vessel?

- (A) One B-I or post 2017 One 10-B extinguisher
- (B) One A-II or post 2017 One 2-A extinguisher
- (C) One B-II, C-II or post 2017 One 40-B:C extinguisher
- (D) None of the above

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

**34.** The definition of "partially protected waters", as used in the Regulations does not include which choice?

- (A) Sheltered waters presenting no special hazard
- (B) Waters within 20 nautical miles from the mouth of a harbor of safe refuge
- (C) The Great Lakes during the summer season
- (D) Harbors, lakes and similar waters determined by the OCMI to be protected waters

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

**35.** How does the Coast Guard determine how many passengers are permitted on a "T-Boat"?

- (A) The "Fixed Seating" criteria that allocates 18 inches of space for each passenger to rest his/her buttocks upon
- (B) The "Deck Area" criteria that permits one passenger for every 10 square feet of deck space available for passenger use
- (C) The "Length of Rail" criteria, allowing 30 inches of rail space along the vessel's sides and transom for each passenger
- (D) Any or a combination of the above criteria

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



**36.** Before issuing an initial Certificate of Inspection, who must consider the construction arrangement and equipment of a vessel to be acceptable? (small passenger vessel regulations)

- (A) U.S. Salvage Marine Surveyor
- (B) American Bureau of Shipping Surveyor
- (C) U.S. Customs Collector
- (D) Officer in Charge, Marine Inspection

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

**37.** How many escape routes must normally exist from all general areas accessible to the passengers or where the crew may be quartered or normally employed? (small passenger vessel regulations)

- (A) Two
- (B) Three
- (C) Four
- (D) Five

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

**38.** Which is TRUE concerning fixed ballast, on small passenger vessels?

- (A) Moved under any condition except extreme emergency
- (B) Moved temporarily for examination or repair of the vessel, when done under the supervision of an inspector
- (C) Discharged or moved at any time
- (D) Only moved under the supervision of the owner, Master or shipyard

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

**39.** Which is TRUE concerning hatches on small passenger vessels operating on exposed waters and exposed to the weather?

- (A) The hatch must be watertight
- (B) The hatch must be open at all times
- (C) The hatch need not be watertight
- (D) None of the above

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

**40.** Which is a requirement of all inlet and discharge fittings below the waterline? (small passenger vessel regulations)

- (A) They shall have an efficient and accessible means of closing
- (B) They shall be cast-iron shut-off valves
- (C) They shall have a blank-off flange of similar material
- (D) They shall have a wooden plug with a 36-inch lanyard

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

**41.** Vessels in ocean service shall carry which item? (small passenger vessel regulations)

- (A) Life floats for 50% of all persons on board
- (B) Buoyant apparatus for all persons on board
- (C) Life jackets for 50% of all persons on board
- (D) Sufficient inflatable buoyant apparatus for all persons on board

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

**42.** Which small passenger vessel(s) is/are NOT required to carry a Category 1 406 MHz EPIRB?

- (A) A vessel operating on lakes, bays, sounds, and rivers
- (B) A coastwise vessel whose route does not take it more than three miles from shore
- (C) A vessel operating within three miles from the coastline of the Great Lakes
- (D) All of the above

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

**43.** Which statement is TRUE concerning the number of portable fire extinguishers required at the operating station of a small passenger vessel? (small passenger vessel regulations)

- (A) None are required.
- (B) One B-I or post 2017 One 10-B:C extinguisher is required
- (C) One B-II or post 2017 One 40-B:C extinguisher is required
- (D) Two B-I or post 2017 Two 10-B:C extinguishers are required

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

**44.** Fixed carbon dioxide fire extinguishing systems shall be installed to protect enclosed machinery and fuel tank spaces of all vessels using gasoline or other fuel having which flash point? (small passenger vessel regulations)

- (A) 0°F or lower
- (B) 75°F or lower
- (C) 90°F or lower
- (D) 110°F or lower

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

**45.** In addition to a portable hand-operated bilge pump, a 55-foot-long ferry must have a fixed power operated bilge pump capable of pumping at least \_\_\_\_\_.

- (A) 5 GPM
- (B) 10 GPM
- (C) 25 GPM
- (D) 50 GPM

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

- 46.** According to the T-Boat regulations the reason for providing adequate ventilation for a battery storage area is to prevent which condition from occurring?
- (A) Battery failure including battery case meltdown caused by excessive heat
  - (B) The accumulation of explosive and toxic gases the battery can generate
  - (C) The mildew or dry rot in the battery box
  - (D) The accumulation of carbon dioxide gas that chokes the battery

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

- 47.** When shall the Master of a small passenger vessel conduct sufficient drills and give sufficient instruction?
- (A) Once every month weather permitting
  - (B) Frequent enough to ensure that all crew members are familiar with their duties during emergencies
  - (C) Every week without fail
  - (D) At each crew change if new hires are reporting aboard for the first time

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

- 48.** How must a small passenger vessel's Official Number be marked on the vessel?
- (A) Mounted so that any alteration, removal, or replacement would be obvious
  - (B) In block type Arabic numerals not less than 3 inches high
  - (C) On some clearly visible interior structural hull part
  - (D) All of the above

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

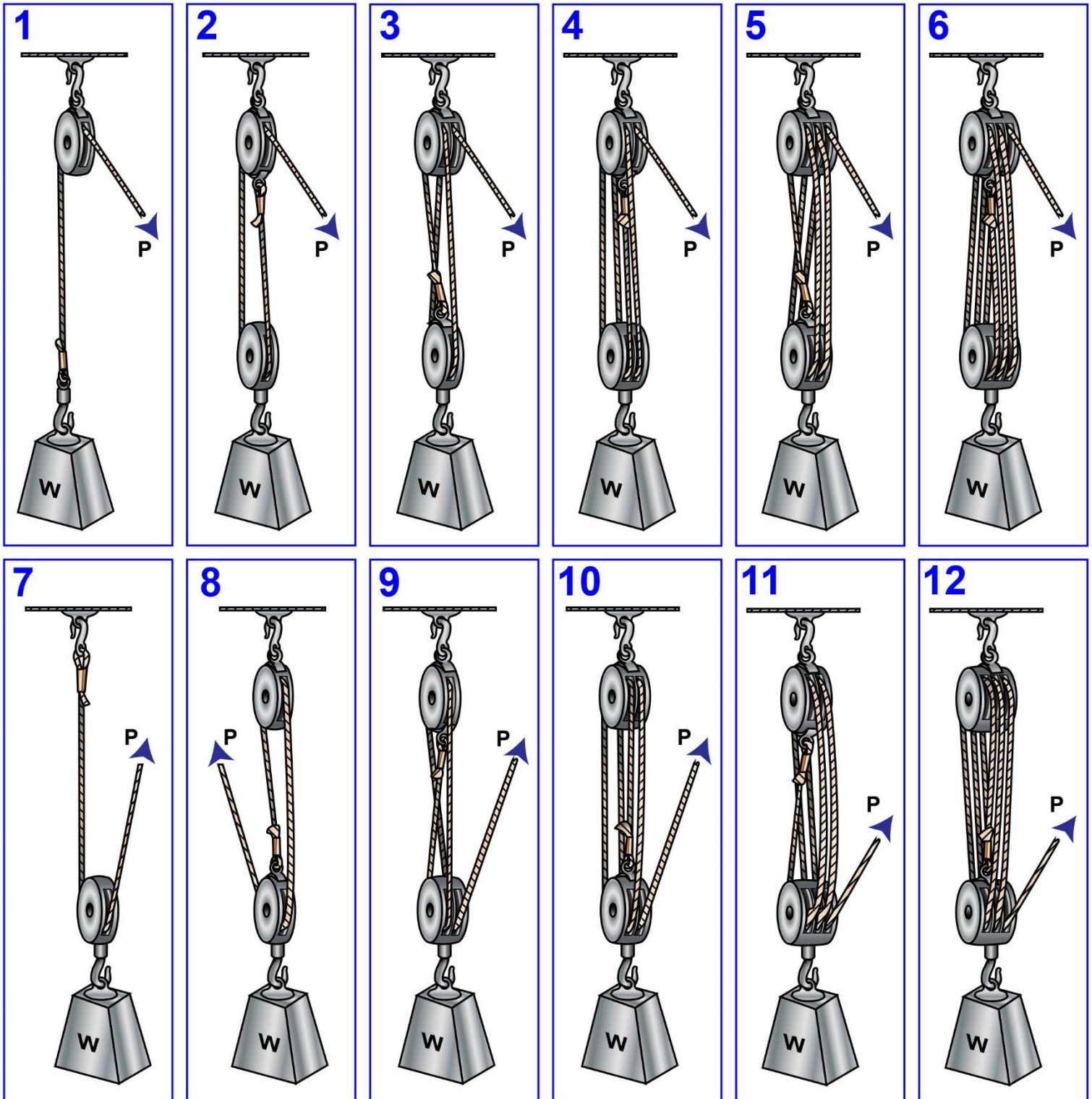
- 49.** Which agency assigns Load lines for U.S. vessels?
- (A) The National Cargo Bureau
  - (B) The American Bureau of Shipping
  - (C) The U.S. Coast Guard
  - (D) The Lloyd's Register of Shipping

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

- 50.** The annual survey for endorsement of a Load Line Certificate must be held within which time frame?
- (A) Three months either way of the certificate's anniversary date
  - (B) The three-month period immediately following the certificate's anniversary date
  - (C) The three-month period immediately preceding the certificate's anniversary date
  - (D) The three-month period centered on the certificate's anniversary date

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

## D029DG



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