

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

Master Near Coastal Less than 100 Gross Registered Tons

Q161 Deck Safety

(Sample Examination)

**Choose the best answer to the following Multiple-Choice Questions.**

1. 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 center of buoyancy
  - B. The keel
  - C. The tipping center
  - D. The amidships center section

Correct answer: A

2. How is the important stability parameter, KG, defined?
- A. The height of the center of gravity above the keel
  - B. The height of the metacenter above the keel
  - C. The height of the center of buoyancy above the keel
  - D. The metacentric height

Correct answer: A

3. Deballasting a double bottom has what effect on KG?
- A. KG is decreased.
  - B. KG is increased.
  - C. KG is not affected.
  - D. KG increases at light drafts and decreases at deep drafts.

Correct answer: B

4. On a vessel, which information can be obtained by multiplying a load's weight by the distance of the load's center of gravity above the baseline?
- A. Righting moment
  - B. Transverse moment
  - C. Vertical moment
  - D. Inclining moment

Correct answer: C

5. Which factor has the greatest effect on the value of the free surface correction?
- A. The draft of the vessel
  - B. The specific gravity of the liquid in the tank
  - C. The length of the tank
  - D. The width of the tank

Correct answer: D

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

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

Correct answer: B

**7.** During cargo operations, your vessel develops a list due to the center of gravity rising above the transverse metacenter. Which is the most prudent action to correct the list?

- A. Shift weight to the high side
- B. Remove weight from the lower holds or double bottoms
- C. Add weight in the center line lower holds or double bottoms
- D. Shift weight to the centerline

Correct answer: C

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

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

Correct answer: B

**9.** For small angles of inclination, if the KG were equal to the KM, which is TRUE concerning the vessel?

- A. The vessel possesses neutral stability
- B. The vessel possesses positive stability
- C. The vessel possesses maximum stability
- D. The vessel possesses negative stability

Correct answer: A

**10.** Aboard a vessel, dividing the sum of the transverse moments by the total weight yields the vessel's \_\_\_\_\_.

- A. transverse position of the center of gravity
- B. righting moments
- C. inclining moments
- D. vertical moments

Correct answer: A

**11.** When a vessel has positive stability, which term is used to describe the distance between the line of force through B and the line of force through G?

- A. Righting moment
- B. Righting arm
- C. Metacentric height
- D. Metacentric radius

Correct answer: B

**12.** Which term represents the weight (measured in tons) required to cause a change in mean draft of one inch?

- A. MH1 inch
- B. ML1 inch
- C. TPI
- D. MT1 inch

Correct answer: C

**13.** Aboard a vessel, what does dividing the sum of the longitudinal moments by the total weight yield?

- A. The righting moments
- B. The vessel's LCG
- C. The inclining moments
- D. The vertical moments

Correct answer: B

**14.** In illustration D033DG below, what is the joint indicated by letter D?

- A. A span
- B. A seam
- C. A butt
- D. A sheet line

Correct answer: C

**15.** Regulations define the bulkhead deck as \_\_\_\_\_. (subdivision and stability regulations)

- A. the lowermost deck to which transverse watertight bulkheads extend
- B. the uppermost deck to which transverse watertight bulkheads extend
- C. the uppermost complete deck
- D. any deck extending from stem to stern

Correct answer: B

**16.** What does the term "beam of a vessel" refer to?

- A. The molded depth of the vessel
- B. The internal cubic capacity
- C. The width of the vessel
- D. The depth between decks

Correct answer: C

**17.** What does the gross tonnage of a vessel indicate?

- A. Volume in cubic feet
- B. Displacement in metric tons
- C. Total weight including cargo
- D. Draft in feet

Correct answer: A

**18.** You discover a leak in the fuel line to the engine. Which action should you take FIRST?

- A. Start the bilge pump
- B. Activate the CO2 system
- C. Close the fuel valve at the tank
- D. Make a temporary repair with canvas or tape

Correct answer: C

**19.** Which action should be taken once fueling has been completed?

- A. Open the fuel line and drain a small amount of gasoline into the bilge to clear the line of sediment
- B. The engine should be started immediately to prevent vapor lock in the fuel line
- C. All hatches should be opened and all compartments should be ventilated
- D. The fuel tank fill pipe should be left open to allow vapors to vent from the tank

Correct answer: C

**20.** Which is TRUE concerning a fuel-air mixture below the lower flammable limit?

- A. The mixture is too lean to burn
- B. The mixture is too dense to burn
- C. The mixture is too cool to burn
- D. The mixture is too rich to burn

Correct answer: A

**21.** Which is TRUE of paints and solvents on a vessel?

- A. They must be stored in a gear locker
- B. They should be returned to the paint locker after each use
- C. They must be covered at all times to protect from ignition sources
- D. They should be stored safely at the work site until work is completed

Correct answer: B

**22.** How can the spread of fire be prevented?

- A. Shutting off the oxygen supply
- B. Cooling surfaces adjacent to the fire
- C. Removing combustibles from the endangered area
- D. All of the above

Correct answer: D

**23.** A burning pile of dunnage would be which classification of fire?

- A. Class A
- B. Class B
- C. Class C
- D. Class D

Correct answer: A

**24.** Which extinguishing agent is/are suitable to combat a class B fire in an engine compartment?

- A. Carbon dioxide
- B. Dry chemical
- C. Foam
- D. All of the above

Correct answer: D

**25.** What is the most important characteristic of the extinguishing agent in fighting a class "C" fire?

- A. Electrical nonconductivity
- B. Weight
- C. Cost
- D. Temperature

Correct answer: A

**26.** A magnesium fire is classified as class \_\_\_\_\_.

- A. Class A
- B. Class B
- C. Class C
- D. Class D

Correct answer: D

**27.** When the handle of an all-purpose nozzle is pulled all the way back, it will \_\_\_\_\_.

- A. produce low-velocity fog
- B. produce high-velocity fog
- C. produce a straight stream
- D. shut off the water

Correct answer: C

**28.** In order to discharge a CO2 portable fire extinguisher, the operator must FIRST take which action?

- A. Squeeze the two trigger handles together
- B. Invert the CO2 extinguisher
- C. Open the discharge valve
- D. Remove the locking pin

Correct answer: D

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

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

Correct answer: A

**30.** If you must swim through an oil fire, which action should be avoided?

- A. Wear as much clothing as possible
- B. Cover eyes with one hand when entering the water
- C. Swim with the wind
- D. Enter the water feet first

Correct answer: C

**31.** If you have to jump in the water when abandoning ship, your legs should be in which position?

- A. Your legs should be in a kneeling position
- B. Your legs should be spread apart as far as possible
- C. Your legs should be extended straight down and crossed at the ankles
- D. Your legs should be held as tightly against your chest as possible

Correct answer: C

**32.** A person who observes an individual fall overboard should do which of the following?

- A. Immediately jump into the water to assist the individual
- B. Go to the control room for the distress flares
- C. Call for help and keep the individual in sight
- D. Run to the radio room to send an emergency message

Correct answer: C

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

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

Correct answer: A

**34.** A situation has occurred where it becomes necessary for you to be towed. What action should be taken to prevent your vessel from yawing?

- A. Shift weight to the bow
- B. Throw excess weight overboard
- C. Shift weight to the center of the boat
- D. Shift weight to the stern

Correct answer: D

**35.** If you have a fire in the engine room, what is the FIRST action you should take?

- A. Discharge the fixed CO2 system into the engine room
- B. Secure the fuel supply and ventilation to the engine room
- C. Maneuver your vessel into the wind
- D. Have all of your crew get into the liferaft

Correct answer: B

**36.** Normally, your vessel is on a voyage of three months duration. How many sanitary inspections are required to be conducted during the voyage?

- A. one
- B. three
- C. six
- D. twelve

Correct answer: A

**37.** The vertical motion of a floating vessel in which the entire hull is lifted by the force of the sea is known by which term?

- A. Pitch
- B. Surge
- C. Heave
- D. Sway

Correct answer: C

**38.** When making VHF radio calls to nearby stations, what level of transmitting power should you use?

- A. Medium power
- B. Extra high power
- C. Low power
- D. High power

Correct answer: C

**39.** What is the lifesaving signal for "You are seen - Assistance will be given as soon as possible"?

- A. Red star rocket
- B. Orange smoke signal
- C. Vertical motion of a flag
- D. Green star rocket

Correct answer: B

**40.** Which statement is TRUE concerning life preservers (Type I personal flotation devices)?

- A. Life preservers must always be worn with the same side facing outwards to float properly.
- B. Life preservers are designed to turn an unconscious person's face clear of the water.
- C. Lightly stained or faded life jackets will fail in the water and should not be used.
- D. Buoyant vests may be substituted for life jackets.

Correct answer: B

**41.** What statement about immersion suits is TRUE?

- A. Immersion suits should be worn while performing routine work on deck.
- B. During the annual maintenance, the front zipper should be lubricated using light machine oil or mineral oil.
- C. No stowage container for immersion suits may be capable of being locked.
- D. Any tear or leak will render the suit unserviceable and it must be replaced.

Correct answer: C



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

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

Correct answer: A

**43.** Which statement is TRUE concerning small passenger vessels bunks installed in overnight passenger accommodation spaces?

- A. must not be located more than 3' high, fitted with a suitable aid to access bunks more than 5' above deck with suitable aids to access bunks more than 5' above deck
- B. must be no less than 74" long and 24" wide with 24" of clear space above
- C. must be immediately adjacent to an aisle leading to a means of escape
- D. All of the above

Correct answer: D

**44.** When must a small passenger vessel of not more than 65 feet in length have a collision bulkhead?

- A. When operates on exposed waters
- B. If it carries more than 49 passengers
- C. If it is more than 40 feet in length and operates on partially exposed waters
- D. All of the above

Correct answer: D

**45.** What is correct with respect to required watertight bulkheads on small passenger vessels less than 100 GT?

- A. Sluice valves are not permitted.
- B. Penetrations are prohibited.
- C. Each bulkhead must be stepped at its midpoint.
- D. All of the above

Correct answer: A

**46.** What is the minimum length of a life floats paddle on a small passenger vessel?

- A. Six feet
- B. Four feet
- C. Three feet
- D. Five feet

Correct answer: B

**47.** On vessels subject to the provisions of 46 CFR Subchapter T, which statement is TRUE concerning life jackets?

- A. They shall be inaccessible to passengers
- B. They shall be on the topmost deck of the vessel at all times
- C. They shall be kept locked up at all times when underway
- D. They shall be stored in convenient places throughout the accommodation spaces

Correct answer: D

**48.** On vessels that are required to have fixed carbon dioxide fire extinguishing systems, the controls to operate the system shall be installed in an accessible location. Which is the required location? (small passenger vessel regulations)

- A. Outside the space protected
- B. Inside the space protected
- C. In a padlocked waterproof metal box
- D. Locally at the carbon dioxide cylinders

Correct answer: A

**49.** When a vessel is required to have a power-driven fire pump, the pump may also be used for which task? (small passenger vessel regulations)

- A. The drinking water supply system
- B. The engine cooling water
- C. The bilge pump
- D. None of the above

Correct answer: C

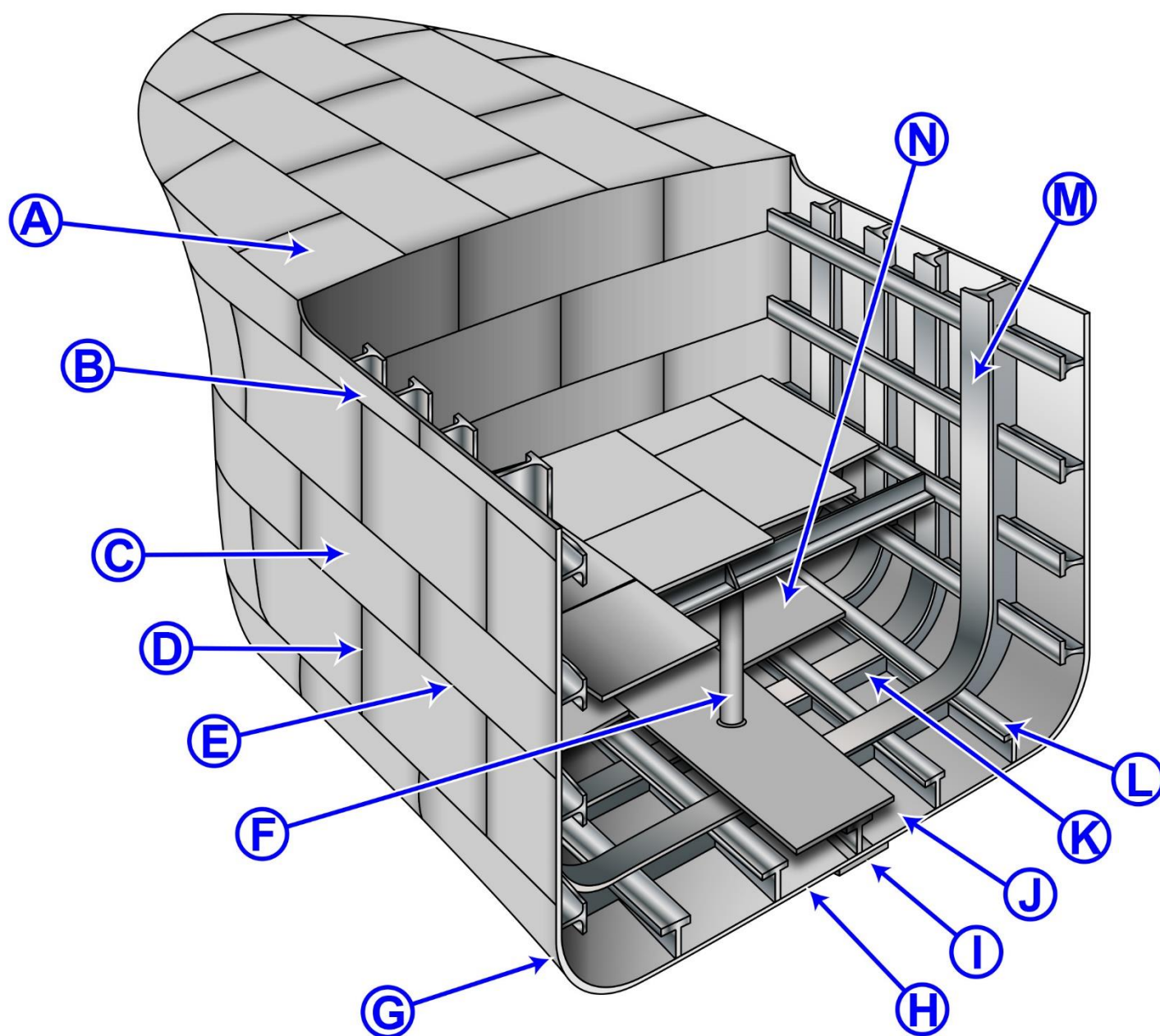
**50.** Individual wires, used in systems greater than 50 volts, shall meet which requirement?

- A. The wires should never be located in a tank
- B. The wires must be installed in conduit
- C. The wire should be supported at 24-inch intervals with plastic tie wraps
- D. All of the above

Correct answer: B



D033DG



Adapted for testing purposes only from Hull Maintenance Technician  
NAVEDTRA 14119

Further reproduction prohibited without permission