

U.S.C.G. Merchant Marine Exam
Master Less than 100 Gross Registered Tons
Q348 Deck Safety
(Sample Examination)

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

1. The total weight of cargo, fuel, water, stores, passengers and crew, and their effects, that a ship can carry, is known as which term?
- A. Gross tonnage
 - B. Bale cubic
 - C. Deadweight
 - D. Loaded displacement

Correct answer: C

2. The water in which a vessel floats provides vertical upward support. Which term is regarded as the point through which this support is assumed to act?
- A. The center of gravity
 - B. The center of effort
 - C. The center of flotation
 - D. The center of buoyancy

Correct answer: D

3. 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 long rolling period
 - B. The vessel will possess negative stability
 - C. The vessel will possess a short rolling period
 - D. The vessel will possess high initial stability

Correct answer: A

4. The effect of free surface on initial stability depends upon which item(s)?
- A. The vertical position of the liquid in the vessel
 - B. The amount of liquid in the compartment
 - C. The dimensions of the liquid surface and the vessel's displacement
 - D. Only the length of the compartment

Correct answer: C

5. Assuming an even transverse distribution of weight in a vessel, which condition could cause a list?
- A. Having KG smaller than KM
 - B. Flooding the forepeak to correct the vessel's trim
 - C. Having a small positive righting arm
 - D. Empty double bottoms and lower holds, and a heavy deck cargo

Correct answer: D

6. For small angles of inclination, if the KG were equal to the KM, which is TRUE concerning the vessel?
- A. The vessel possesses positive stability
 - B. The vessel possesses maximum stability
 - C. The vessel possesses neutral stability
 - D. The vessel possesses negative stability

Correct answer: C

7. 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. vertical moments
 - D. inclining moments

Correct answer: A

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

Correct answer: B

9. How may the change in trim of a vessel be found?
- A. By dividing the trim moments by MT1
 - B. By looking at the Hydrostatic Properties Table for the draft of the vessel
 - C. By dividing longitudinal moments by the displacement
 - D. By subtracting the LCF from the LCB

Correct answer: A

10. Pitching is angular motion of the vessel about what axis?
- A. Transverse
 - B. Vertical
 - C. Centerline
 - D. Longitudinal

Correct answer: A

11. Yawing is angular motion of the vessel about what axis?
- A. Longitudinal
 - B. Centerline
 - C. Vertical
 - D. Transverse

Correct answer: C

12. Why must the exhaust pipe be gas tight throughout its entire length on your vessel?

- A. Carbon monoxide may enter the interior of the vessel
- B. Entry of air may cause the engine to vapor lock
- C. To prevent bilge water from entering the exhaust pipe
- D. The pipe joint gaskets may be blown

Correct answer: A

13. Which of the following is one of the most important safety procedures that should be adhered to prior to starting a gasoline engine on a motorboat?

- A. You have fresh water on board
- B. The bilges, cabins, etc. are thoroughly ventilated
- C. The gasoline tank is full
- D. Each of the above is followed

Correct answer: B

14. For the purpose of training and drills, if reasonable and practicable, how frequently should rescue boats be launched with their assigned crew?

- A. Once a month
- B. Once a year
- C. Once a week
- D. Twice a year

Correct answer: A

15. Which is TRUE if passengers are on board when an abandon ship drill is carried out?

- A. The passengers should just watch
- B. The passengers should stay out of the way and do what they want
- C. The passengers should take part in the drill
- D. Passengers should go to their quarters during drills

Correct answer: C

16. Spontaneous ignition can result from _____.

- A. careless disposal or storage of material
- B. worn electrical wires on power tools
- C. smoking in bed
- D. an unprotected drop-light bulb

Correct answer: A

17. Which is the flammable limit range of Diesel Oil mixed with air?

- A. 0% to 1% by volume
- B. 0.8% to 5.3% by volume
- C. 1.3% to 6.0% by volume
- D. 6.3% to 12.1% by volume

Correct answer: C

18. Which term defines the minimum concentration of a vapor in air which can form a mixture that ignites and burns?

- A. Flash point
- B. Lower flammable limit (LFL)
- C. Threshold limit value (TLV)
- D. Auto-ignition point

Correct answer: B

19. Which extinguishing agent is the best for use on electrical fires?

- A. Foam
- B. Water fog
- C. Dry chemical
- D. CO₂

Correct answer: D

20. What is the primary hazard, other than fire damage, associated with a class C fire?

- A. Explosion
- B. Possibility of reflash
- C. Flashover
- D. Electrocution or shock

Correct answer: D

21. While you are working in a space, the fixed CO₂ system is accidentally activated. Which action should you take?

- A. Make sure all doors and vents are secured
- B. Secure the applicators to preserve the charge in the cylinders
- C. Continue with your work as there is nothing you can do to stop the flow of CO₂
- D. Retreat to fresh air and ventilate the compartment before returning

Correct answer: D

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

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

Correct answer: B

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

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

Correct answer: D

24. Which advantage does dry chemical have over carbon dioxide (CO₂) in firefighting?

- A. Compatible with all foam agents
- B. Cleaner
- C. More protective against re-flash
- D. All of the above

Correct answer: C

25. Which extinguishing agent is most effective for combating wood fires?

- A. Dry chemical
- B. Carbon dioxide
- C. Dry powder
- D. Water

Correct answer: D

26. The outlet at a fire hydrant may be positioned anywhere from horizontal to pointing in which direction(s)?

- A. Vertically upward
- B. Vertically downward
- C. 45° upward
- D. All of the above

Correct answer: B

27. Fire hose should be washed with _____.

- A. a holystone
- B. mild soap and fresh water
- C. caustic soap
- D. salt water and a wire brush

Correct answer: B

28. A self-contained breathing apparatus is used to _____.

- A. determine if the air in a tank is safe for men
- B. resuscitate an unconscious person
- C. enter areas that may contain dangerous fumes or lack oxygen
- D. make underwater repairs to barges

Correct answer: C

29. If you must jump from a vessel, what does the correct posture include?

- A. Both hands holding the life preserver below the chin with knees bent and legs crossed
- B. Body straight and arms held tightly at the sides for feet first entry into the water
- C. Knees bent and held close to the body with both arms around legs
- D. Holding down the life preserver against the chest with one arm crossing the other, covering the mouth and nose with a hand, and feet together

Correct answer: D

30. When abandoning ship and jumping into the water from a substantial height without a life jacket, you should _____.
- A. jump feet first, covering your nose and mouth with one hand and grasping the opposing upper arm with the other
 - B. hold your arms firmly at your sides and jump feet first
 - C. jump feet first, holding your knees to your chest
 - D. dive headfirst, using your hands to break the surface of the water

Correct answer: A

31. A situation has occurred in which your vessel must be towed. When the towing vessel passes the towing line to you, where should you secure the line?
- A. At the stern
 - B. To the base of the foremast
 - C. To the forwardmost bits
 - D. To the forward part of the deckhouse

Correct answer: C

32. You are attempting to take a dead ship in tow. All lines have been passed and secured. How should you get underway?
- A. Order minimum turns until the towing hawser is just clear of the water, then reduce speed to that necessary to keep the line clear of the water.
 - B. Order minimum turns until the towing hawser is taut and then continue at that speed until towing speed is attained.
 - C. If the towline is properly adjusted and weighted you can order slow or dead slow and the towline will act as a spring to absorb the initial shock.
 - D. Gradually apply power until catenary almost breaks the water, but keep the catenary in the water.

Correct answer: D

33. If you are fighting a fire below the main deck of your vessel, which action is most important concerning the stability of the vessel?
- A. Maneuvering the vessel so the fire is on the lee side
 - B. Removing burned debris from the cargo hold
 - C. Pumping firefighting water overboard
 - D. Shutting off electricity to damaged cables

Correct answer: C

34. A fire starts on your vessel while refueling. Which action should you take FIRST?
- A. Stop the ventilation
 - B. Determine the source of the fire
 - C. Attempt to extinguish the fire
 - D. Sound the general alarm

Correct answer: D

35. You suspect that a crewmember has fallen overboard during the night and immediately execute a Williamson turn. What is the primary advantage of this maneuver under these circumstances?
- A. You have extra time to maneuver in attempting to close in on the man for rescue.
 - B. You will be on a reciprocal course and nearly on the track-line run during the night.
 - C. The turn enables you to reverse course in the shortest possible time.
 - D. The turn provides the maximum coverage of the area to be searched.

Correct answer: B

36. You are on watch and receive word that a person has fallen overboard from the starboard side. What should your first action be?
- A. Put the wheel hard right
 - B. Notify the Master
 - C. Sound the man overboard alarm
 - D. Put the engines full astern

Correct answer: A

37. Which officer is responsible for the sanitary condition of the engineering department?
- A. Master
 - B. Chief Engineer
 - C. First Assistant
 - D. Chief Mate

Correct answer: B

38. Why is it desirable to have screens on the vents of potable water tanks?
- A. To stop insects from entering
 - B. To prevent backups
 - C. To prevent explosions
 - D. To filter the incoming air

Correct answer: A

39. Which action should you take after sending a false distress alert on VHF?
- A. Make a voice announcement to cancel the alert on Ch-16.
 - B. Make a voice announcement to cancel the alert on Ch-22A.
 - C. Make a voice announcement to cancel the alert on Ch-13.
 - D. Send a DSC cancellation message on Ch-70.

Correct answer: A

40. Which is the VHF radiotelephone frequency designated to be used only to transmit or receive information pertaining to the safe navigation of a vessel?
- A. 156.6 MHz (channel 12)
 - B. 156.8 MHz (channel 16)
 - C. 156.65 MHz (channel 13)
 - D. 156.7 MHz (channel 14)

Correct answer: C

41. Which is the national distress, safety, and calling frequency channel?

- A. 18
- B. 13
- C. 16
- D. 22

Correct answer: C

42. When should you use distress flares and rockets?

- A. Immediately upon abandoning the vessel
- B. At one-hour intervals
- C. Only when there is a chance of their being seen by rescue vessels
- D. At half-hour intervals

Correct answer: C

43. What do regulations require of approved buoyant work vests? (small passenger vessel regulations)

- A. They may not be carried on inspected vessels
- B. They shall be stowed separately from the required life jackets
- C. They shall be stowed in a place inaccessible to passengers
- D. They may be substituted for 10% of the required life jackets

Correct answer: B

44. 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

45. U.S.C.G. approved buoyant work vests are considered to be items of safety equipment and may be worn by members of the crew. When can crewmembers wear these work vests?

- A. When carrying out duties near a weather deck's edge
- B. In lieu of life preservers during boat drills
- C. In lieu of life preservers during an actual emergency
- D. In lieu of life preservers during fire drills

Correct answer: A

46. 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

47. 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

Correct answer: D

48. On a small passenger vessel, 58 feet in length, carrying 52 passengers the fire pump shall have a minimum pumping capacity of how many gallons per minute?
- A. 50 gallons per minute
 - B. 25 gallons per minute
 - C. 100 gallons per minute
 - D. 10 gallons per minute

Correct answer: A

49. Which action should be taken prior to assuming the Deck Watch while the vessel is in port?
- A. Make a security call on VHF channel 16
 - B. Ensure that all crew members are onboard
 - C. Ensure that the vessel's moorings are adequate
 - D. Visually inspect and test operation of the blue mooring light

Correct answer: C

50. When a helmsman receives the command "Right 15 degrees rudder," what should the helmsman's immediate reply be?
- A. "Right 15 degrees rudder"
 - B. "Aye Aye Sir"
 - C. No reply is necessary, just carry out the order.
 - D. "Rudder is right 15 degrees"

Correct answer: A