

U.S.C.G. Merchant Marine Exam
Master Unlimited Tonnage Rivers
Q381 Deck Safety
(Sample Examination)

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

1. According to the Lifesaving regulations in Subchapter W, fire and abandon ship drills must be held within 24 hours of leaving port if the percentage of the crew that has not participated in drills aboard that particular vessel in the prior month exceeds which percentage?
- A. 5%
 - B. 10%
 - C. 25%
 - D. 40%

Correct answer: C

2. What is required in addition to the heat, fuel, and oxygen of the fire triangle to have a fire?
- A. Chain reaction
 - B. Electricity
 - C. Smoke
 - D. Pressure

Correct answer: A

3. 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

4. What is the main advantage of a steady stream of water on a class "A" fire?
- A. It breaks up and cools the fire
 - B. It washes the fire away
 - C. It removes the oxygen
 - D. It protects the firefighting crew

Correct answer: A

5. Fire hose should be washed with _____.
- A. salt water and a wire brush
 - B. caustic soap
 - C. mild soap and fresh water
 - D. a holystone

Correct answer: C

6. When compared to low-expansion foam, a high-expansion foam will _____.
- A. not cling to vertical surfaces
 - B. be more heat resistant
 - C. be drier
 - D. be heavier

Correct answer: C

7. One gallon of high expansion foam solution will produce _____.
- A. 8 to 10 gallons of foam
 - B. 25 to 50 gallons of foam
 - C. 100 to 200 gallons of foam
 - D. 500 to 1000 gallons of foam

Correct answer: D

8. You are at sea and have received a General Emergency message announcing the outbreak of war in Europe. You are directed to comply with the instructions in NGA (NIMA) PUB 117, Chapter Eight. Which statement is TRUE?
- A. You should only enter a port in the danger zone during hours of darkness
 - B. If on a coastwise voyage along the east coast of the U.S., you should put into the nearest port
 - C. You should attempt to coordinate with the Shipping Control Team
 - D. When over 200 miles from a port in the danger zone, you should not darken ship

Correct answer: C

9. If you are forced to abandon ship in a rescue boat, which action should you take?
- A. Head for the nearest land
 - B. Vote on what to do, so all hands will have a part in the decision
 - C. Remain in the immediate vicinity
 - D. Head for the closest sea lanes

Correct answer: C

10. When using the rainwater collection tubes on a liferaft, what should be done with the first collection?
- A. It should be saved to be used at a later time
 - B. Poured overboard because of salt washed off the canopy
 - C. It should be used to boil food
 - D. Passed around so all can drink their fill

Correct answer: B

11. A fuel line breaks, sprays fuel on the hot exhaust manifold and catches fire. What should be your FIRST action?
- A. Apply carbon dioxide to the fire
 - B. Secure the fuel supply
 - C. Start the fire pump
 - D. Batten down the engine room

Correct answer: B

12. When should a fire be ventilated?

- A. When using a steam smothering system
- B. When using the fixed CO₂ system
- C. When attacking the fire directly
- D. All of the above

Correct answer: C

13. Overhauling a fire in the living quarters on a vessel must include which action?

- A. Opening dead spaces to check for heat or fire
- B. Sounding the "all clear" signal, no action is necessary
- C. Operation of the emergency generator
- D. The immediate evacuation of the vessel

Correct answer: A

14. You abandoned ship in the North Atlantic and one of the crew members is hypothermic. During a SAR helicopter extraction which lifting device should be avoided when hoisting this patient to the aircraft?

- A. The rescue litter
- B. The rescue net
- C. The rescue basket
- D. The rescue sling

Correct answer: D

15. Your vessel has an injured crew member onboard that will require evacuation. Which of the following publications should you review for the procedures in conducting rescue/medivac helicopter operations?

- A. Pub 117 Radio Aids to Navigation
- B. Merchant Marine Officers Handbook
- C. International Maritime Organization Life-Saving Appliance Code Manual
- D. International Aeronautical and Maritime Search and Rescue Manual

Correct answer: D

16. Which statement about the Williamson turn is FALSE?

- A. It is the slowest of the methods used in turning the vessel.
- B. It returns the vessel to the original track-line on a reciprocal course.
- C. It is the best turn to use when the victim is not in sight due to reduced visibility.
- D. It requires the highest degree of shiphandling skills to accomplish.

Correct answer: D

17. 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

18. If the situation arose where it became necessary to tow a disabled vessel, which statement is TRUE concerning the towing line?

- A. There should be a catenary so the line dips into the water.
- B. The towing line between the two vessels should be clear of the water.
- C. The towing line should be taut at all times between the vessels.
- D. None of the above.

Correct answer: A

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

Correct answer: D

20. Which are general requirements for a vessel's radiotelephone station log?

- A. It must identify the vessel's name and official number
- B. Logs must be kept in an orderly manner
- C. Erasures are not allowed
- D. All of the above

Correct answer: D

21. You are piloting a vessel, which is required to have a radiotelephone, on the navigable waters of the United States. Choose the best answer that states the requirement(s) of the regulations?

- A. Use the bridge-to-bridge VHF-FM designated frequency only to exchange navigational information or necessary tests
- B. Maintain a listening watch and communicate in English
- C. Have on board an operator who holds a restricted radiotelephone operator permit or higher license, as well as a FCC ship station license
- D. All of the above

Correct answer: D

22. Which color of rockets, shells, or rocket parachute flares are used to indicate that the vessel is in distress and requires immediate assistance?

- A. Yellow
- B. Green
- C. White
- D. Red

Correct answer: D

23. What is the lifesaving signal indicating "You are seen - Assistance will be given as soon as possible"?

- A. Vertical motion of white flags
- B. Firing of a green star signal
- C. Vertical motion of a white light or flare
- D. None of the above

Correct answer: D

24. What is the usual depth of a beam bracket?

- A. 10 times the depth of the beam
- B. same depth as the beam
- C. 5 times the depth of the beam
- D. 2 1/2 times the depth of the beam

Correct answer: D

25. A carling is used aboard ship to accomplish which function?

- A. To prevent the anchor from fouling when the brake is released
- B. To stiffen areas under points of great stress between beams
- C. To provide an extra heavy fitting in a heavy lift cargo rig
- D. To act as a connecting strap between the butted ends of plating

Correct answer: B

26. A vessel's "quarter" is that section which is _____.

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

Correct answer: A

27. What is the name given to the distance between the waterline of a vessel and the main continuous deck of a vessel?

- A. The freeboard
- B. The camber
- C. Buoyancy
- D. The draft

Correct answer: A

28. What does the gross tonnage of a vessel indicate?

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

Correct answer: D

- 29.** In the presence of external forces, the center of buoyancy of an inclined vessel is vertically aligned with which item?
- A. The center of flotation
 - B. The keel
 - C. The center of gravity
 - D. The metacenter

Correct answer: D

- 30.** What will happen when cargo is shifted from the main deck into the lower hold of a vessel?
- A. The GM will increase.
 - B. The metacenter will move upward.
 - C. The center of buoyancy will move upward.
 - D. All of the above

Correct answer: A

- 31.** If the cause of a sudden severe list or trim is negative initial stability, counter-flooding into empty tanks located high on the vessel, may cause which of the following?
- A. Cause the unit to flop to a greater angle
 - B. An increase in the righting arm
 - C. Bring the unit to an upright equilibrium position
 - D. An increase in the righting moment

Correct answer: A

- 32.** The two factors which make underwater hull repair difficult are accessibility and which other factor?
- A. The availability of tools
 - B. The shape of the hull
 - C. The pressure exerted by the water
 - D. The threat of progressive flooding

Correct answer: C

- 33.** When patching holes in the hull, how can pillows, bedding, and other soft materials be used?
- A. As strongbacks
 - B. As gaskets
 - C. As shores
 - D. As wedges

Correct answer: B

- 34.** When shoring a damaged bulkhead, effort should be taken to spread the pressure over the _____.
- A. maximum possible area
 - B. minimum possible area
 - C. nearest longitudinal girder
 - D. nearest watertight door

Correct answer: A

35. You are loading in a port subject to the winter load line mark and bound for a port subject to the tropical load line mark. You will enter the summer zone after steaming four days, and you will enter the tropical zone after a total of twelve days. You will consume 39 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.025, and the average TPI is 49. What is the minimum freeboard required at the start of the voyage? Reference Table BL-0010 below.

BL-0010

FREEBOARD FROM DECK LINE		LOAD LINE	
Tropical	76 inches	(T)	7 inches above (S)
Summer	83 inches	(S)	*
Winter	90 inches	(W)	7 inches below (S)
Fresh water allowance	10 inches		

- A. 90 inches
- B. 87 inches
- C. 80 inches
- D. 77 inches

Correct answer: A

36. According to the Code of Federal Regulations, which of the following statements is correct regarding the steering gear on a vessel contracted for after June 9, 1995?

- A. A separate auxiliary means of steering is not required where the main gear is of the dual power hydraulic type, having two independent pumps and connections.
- B. On hydraulic type steering gears, a suitable arrangement of check valves in the main piping system may be considered as a means of steadying the rudder.
- C. Hydraulic structural rudder stops are mandatory.
- D. All of the above.

Correct answer: A

37. Under normal operating conditions, the rudder is hydraulically locked unless which situation occurs?

- A. The variable stroke pump is off stroke
- B. A rudder order is given by the control system
- C. An electric power system failure occurs at the steering gear
- D. The manual trick wheel is engaged for steering

Correct answer: B

38. Which defines the function of a spark arrestor?

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

Correct answer: C

39. What quality of a diesel fuel is most significant for efficient combustion?

- A. Flash point
- B. Volatility
- C. Specific heat
- D. Viscosity

Correct answer: B

40. During fueling, all doors, hatches, and ports _____.

- A. should be closed
- B. should be opened
- C. to windward should be opened and the ones to leeward should be closed
- D. to leeward should be opened and the ones to windward should be closed

Correct answer: A

41. What monitoring device best indicates the load being carried by a diesel engine?

- A. Tachometer
- B. Exhaust pyrometer
- C. Jacket water temperature gauge
- D. Lube oil pressure gauge

Correct answer: B

42. Your stability calculations indicate your vessel has a marginal GM. Which of the following is the most effective way to increase the stability of the vessel?

- A. Raise the center of buoyancy and reduce freeboard
- B. Lower the center of buoyancy and raise the center of gravity
- C. Raise the center of gravity and raise the center of buoyancy
- D. Lower the center of gravity and raise reserve buoyancy

Correct answer: D

43. You are in the process of righting an inflatable liferaft that has inflated in an upside down position. Which statement is TRUE?

- A. Swim out from under the raft in a face up position to keep your life preservers clear of the raft.
- B. As the raft flips to the upright position, you will be thrown clear.
- C. You should remove your life preservers before attempting to right an inflatable raft.
- D. After the raft is in the upright position on top of you, dive down to prevent your life preservers from fouling as you come out.

Correct answer: A

44. Where must the life jackets be stowed?

- A. Only in the survival crafts
- B. Locked in watertight containers
- C. In each of the messrooms
- D. In readily accessible locations

Correct answer: D

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

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

Correct answer: B

46. All lifeboats, rescue boats, and rigid-type liferafts shall be stripped, cleaned, and thoroughly overhauled at which time interval?

- A. 6 months
- B. Yearly
- C. 18 months
- D. Every two years

Correct answer: B

47. How many ring life buoys should a 700-foot cargo vessel, not subject to SOLAS, navigating the Great Lakes carry?

- A. 12
- B. 14
- C. 18
- D. 24

Correct answer: B

48. Line throwing apparatus aboard ship must contain which items?

- A. Two rockets, one of which shall be the buoyant type
- B. Three rockets, one of which shall be the buoyant type
- C. Four rockets, two of which shall be the buoyant type
- D. Five rockets, two of which shall be the buoyant type

Correct answer: C

49. Which officer is responsible for the sanitary condition of the engineering department?

- A. Chief Mate
- B. Master
- C. First Assistant
- D. Chief Engineer

Correct answer: D

50. 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