

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. What shall be conducted during a fire and boat drill?

- A. All watertight doors in the vicinity of the drill shall be operated.
- B. Fire pumps shall be started and all exterior outlets opened.
- C. All lifeboat equipment shall be examined.
- D. All of the above

Correct answer: A

2. In the event of a fire, the doors to a stair tower must be closed to prevent the spread of fire by which method?

- A. Radiation
- B. Convection
- C. Ventilation
- D. Conduction

Correct answer: B

3. Which of the following terms defines the minimum temperature required to ignite gas or vapor without a spark or flame being present?

- A. Lower explosive limit
- B. Autoignition temperature
- C. Flash point
- D. Fire point

Correct answer: B

4. Any extinguishing agent used on a Class "C" fire must have which important property?

- A. Penetrating power
- B. Nonconductivity
- C. Cooling ability
- D. Leaves no residue

Correct answer: B

5. Which instrument is suitable for determining the presence of explosive concentrations of fuel oil vapors in tanks?

- A. A combustible gas indicator
- B. A liquid cargo meter
- C. A flame safety lamp
- D. All of the above

Correct answer: A

6. What is the most vulnerable part of the fire main system?

- A. Exposed hard piping
- B. The fire pump
- C. The hydrant valve
- D. The fire hose

Correct answer: D

7. You are tending the lifeline of a man who entered a compartment using a breathing apparatus. How many tugs on the lifeline indicate the man should advance?

- A. 1
- B. 2
- C. 3
- D. 4

Correct answer: B

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. When over 200 miles from a port in the danger zone, you should not darken ship
- D. You should attempt to coordinate with the Shipping Control Team

Correct answer: D

9. You have just abandoned ship and boarded a raft. After the raft is completely inflated you hear a whistling noise coming from a safety valve. Which action should you take?

- A. Do not become alarmed unless it continues for a long period of time
- B. Plug the safety valve
- C. Unscrew the deflation plugs
- D. Remove the safety valve and replace it with a soft patch

Correct answer: A

10. After abandoning ship which action should be taken IMMEDIATELY upon entering a liferaft?

- A. Get clear of the ship.
- B. Open equipment pack.
- C. Dry the liferaft floor and inflate.
- D. Issue anti-seasickness medicine.

Correct answer: A

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

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

Correct answer: C

12. 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. Maneuver your vessel into the wind
- C. Secure the fuel supply and ventilation to the engine room
- D. Have all of your crew get into the liferaft

Correct answer: C

13. When possible, what is the FIRST step in fighting an engine fuel-pump fire which results from a broken fuel line?

- A. Cast the barge off the wharf.
- B. Check the spread of the fire with foam.
- C. Close the fuel line valve.
- D. Secure all engine room doors, hatches, and vents.

Correct answer: C

14. You are on a 165 foot (50.3 meters) long vessel with a draft of 9 feet (2.7 meters) and twin screws. Which statement about rescuing a survivor in the water with ship pickup is TRUE?

- A. You should stop with the man on your weather beam and twist the ship up to him.
- B. Ship pick up should never be used with a shallow draft vessel.
- C. You should stop to windward of the man and drift down on him.
- D. A pickup off the weather bow gives maximum maneuverability with the least possibility of injury to the man.

Correct answer: D

15. You are picking up a conscious person that has fallen overboard in one of the vessels motorboats. Recovery is easier in a light breeze if you approach from which direction?

- A. Leeward with the victim to windward
- B. Approach with the wind on your port side
- C. Approach with the wind on your starboard side
- D. Windward with the victim to leeward

Correct answer: D

16. On a small boat, if someone fell overboard and you did not know over which side the person fell, which action should you take?
- A. Stop the propellers from turning and throw a ring buoy over the side
 - B. Immediately reverse the engines
 - C. First put the rudder hard over in either direction
 - D. Increase speed to full to get the vessel away from the person

Correct answer: A

17. A seaman is reported missing in the morning and was last seen after coming off the mid-watch. Which type of turn would you use to return to the track-line steamed during the night?
- A. 180° turn
 - B. Williamson
 - C. Anderson
 - D. Racetrack

Correct answer: B

18. 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 forward part of the deckhouse
 - C. To the forwardmost bitts
 - D. To the base of the foremast

Correct answer: C

19. You have a large, broken-down vessel in tow with a wire rope and anchor cable towline. Both vessels have made provision for slipping the tow in an emergency; however, unless there are special circumstances which is TRUE?
- A. The towing vessel should slip first
 - B. The vessel towed should slip first
 - C. They should slip simultaneously
 - D. Either vessel may slip first

Correct answer: A

20. According to the "Vessel Bridge-to-Bridge Radiotelephone Act", what information that affects your vessel is required to be entered into the radiotelephone log?
- A. The home address of the vessel's Master or owner
 - B. A record of your transmissions only
 - C. A record of all routine calls
 - D. A summary of all distress calls and messages

Correct answer: D

21. Which has the MOST effect on the range of a SSB transmission?

- A. The frequency band selected and time of day or night
- B. Radiated power and nearness to shore
- C. Atmospheric noise and radiated power
- D. Interference and position of the moon

Correct answer: A

22. You have sent a visual signal to an aircraft. The aircraft then flies over your position on a straight course and level altitude. What should you do?

- A. Send more signals
- B. Prepare for a helicopter pickup
- C. Change course to follow the airplane
- D. Repeat your signal

Correct answer: D

23. What may the firing of a red star signal mean?

- A. "You are seen - assistance will be given as soon as possible"
- B. "Slack away"
- C. "This is the best place to land"
- D. "Tail block is made fast"

Correct answer: B

24. Which term is given to the wooden planking that protects the tank top from cargo loading?

- A. Ceiling
- B. Shores
- C. Toms
- D. Frames

Correct answer: A

25. The pillar shape that gives the greatest strength for the least weight is the _____.

- A. "H" Beam pillar
- B. Circular type pillar
- C. "I" Beam pillar
- D. Solid octagonal pillar

Correct answer: B

26. Which term is given to the upward slope of a vessels bottom from the keel to the bilge?

- A. Rake
- B. Camber
- C. Rise of floor
- D. Sheer

Correct answer: C

27. What term indicates the immersed body of the vessel forward of the parallel mid-body?

- A. Sheer
- B. Run
- C. Flare
- D. Entrance

Correct answer: D

28. Tonnage openings must be closed by means of _____.

- A. press board
- B. steel hatch boards
- C. wooden hatch boards
- D. steel plates

Correct answer: D

29. Deballasting a double bottom has what effect on KG?

- A. KG increases at light drafts and decreases at deep drafts.
- B. KG is increased.
- C. KG is decreased.
- D. KG is not affected.

Correct answer: B

30. 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 negative stability
- C. The vessel possesses maximum stability
- D. The vessel possesses positive stability

Correct answer: A

31. When the height of the metacenter is the same as the height of the center of gravity, the metacentric height is equal to _____.

- A. the height of the metacenter
- B. zero
- C. the height of the center of gravity
- D. half the height of the metacenter

Correct answer: B

32. The greatest effect on stability occurs from loose liquids flowing _____.

- A. in and out of a vessel that is holed in a peak tank
- B. from side to side in the tanks of the vessel
- C. from fore to aft in the tanks of a vessel
- D. in and out of a vessel that is holed in a wing tank

Correct answer: D

33. A tank with internal dimensions of 40 feet X 20 feet X 12 feet is pressed with fuel oil weighing 54 pounds per cubic foot. What is the weight, in short tons, of the liquid?

- A. 259.2 short tons
- B. 135.0 short tons
- C. 518.4 short tons
- D. 11.3 short tons

Correct answer: A

34. The most detrimental effect on initial stability is a result of liquids _____.

- A. pocketing in a slack tank as a vessel heels
- B. flowing from side to side within the vessel
- C. flowing from fore to aft within a vessel
- D. flowing in and out of a holed wing tank

Correct answer: D

35. You are loading in a port subject to the summer load line mark and bound for a port subject to the tropical load line mark. You will enter the tropical zone after steaming four days. You will consume 33 tons of fuel, water, and stores per day. The hydrometer reading at the loading pier is 1.006, and the average TPI is 66. What is the minimum freeboard required at the start of the voyage? Reference Table BL-0022 below.

BL-0022

FREEBOARD FROM DECK LINE		LOAD LINE	
Tropical	77 inches	(T)	7 inches above (S)
Summer	84 inches	(S)	*
Winter	91 inches	(W)	7 inches below (S)
Fresh water allowance	8 inches		

- A. 78 inches
- B. 82 inches
- C. 86 inches
- D. 88 inches

Correct answer: A

36. Which is TRUE of the mechanical gearing of deck machinery such as the windlass or towing engines?

- A. They should be open to view so, if a foreign object gets in the gearing, the operator can immediately stop the machinery
- B. They should not be operated if there is any crew within 10 feet of the machinery
- C. They should be painted a contrasting color from the base color in order to call attention to the gearing
- D. They should have a guard over the gearing

Correct answer: D

37. How does the rotation of the steering wheel on the navigation bridge initiate oil pressure being applied to the steering gear rams?

- A. By regulating the oil flow with the six-way valve
- B. It is moving the follow up indicator which regulates the six-way valve
- C. By varying the angle of a tilting box or eccentricity of a floating ring
- D. It is moving the automatic differential valve

Correct answer: C

38. What is the purpose of a striking plate?

- A. Absorbs machinery vibration
- B. Prevents valve stem over-travel
- C. Provides landing surface for the sounding bob
- D. Provides surface for applying force on machinery

Correct answer: C

39. What does a pyrometer measure on a diesel engine?

- A. Exhaust temperature
- B. Water temperature
- C. Water pressure
- D. Air box pressure

Correct answer: A

40. What is an advantage of diesel over steam turbine propulsion?

- A. Diesel fuel costs less than bunker C or its equivalent
- B. Less fuel consumption per SHP
- C. Less routine maintenance required
- D. Less weight per SHP

Correct answer: B

41. Which is the major disadvantage of a low-speed diesel as compared to a steam main-propulsion system?

- A. The minimum speed for the engines that limits the minimum speed of the vessel
- B. The extra weight required for the diesel reduction gearing
- C. The higher fuel consumption per SHP
- D. The low efficiency of the system when a controllable pitch propeller is used

Correct answer: A

42. Your vessel has run hard aground in an area subject to heavy wave action. Backing full astern failed to free her. Which action should be taken next?

- A. Shift weight aft to reduce the forward draft.
- B. Flood empty tanks to increase bottom pressure and prevent inshore creep.
- C. Continue backing to scour out the bottom.
- D. Wait for high tide and then try backing.

Correct answer: B

43. Inflatable liferafts are less maneuverable than lifeboats due to their _____.

- A. large sail area
- B. shallow draft
- C. shape
- D. All of the above

Correct answer: D

44. Your vessel has 3 lifeboats on each side. What is designated boat number of the middle boat on the starboard side?

- A. 2
- B. 2 STARBOARD
- C. 3
- D. 4

Correct answer: C

45. You have abandoned your vessel and are the person in charge of lifeboat No. 2. Which procedure should be followed when landing a boat under oars through a slight surf?

- A. Head into the seas and drift astern with the sea anchor deployed until land is reached
- B. Head into the beach, tripping the sea anchor from the stern while steadily rowing towards the beach
- C. Head into the seas, tripping the sea anchor and resetting between swells to allow back-watering to the beach
- D. Head into the beach, row steadily and swiftly as possible until land is reached

Correct answer: C

46. On an oceangoing vessel, for each person a lifeboat (without desalting kits) is certified to carry, what must the boat be supplied with?

- A. 3 liters of water
- B. A signaling whistle
- C. 2 pounds of condensed milk
- D. A life preserver

Correct answer: A

47. Which statement is TRUE concerning spare charges for portable fire extinguishers on unmanned tank barges?

- A. Regulations concerning spare charges do not apply to unmanned barges.
- B. Spare charges shall be stowed in watertight containers on deck.
- C. If the unit cannot be charged by the vessel's personnel, one spare unit shall be carried in lieu of spare charges.
- D. Spare charges shall be carried for at least 50 percent of each size and variety required on board.

Correct answer: A

48. Which action must be taken annually concerning inflatable liferafts carried on passenger vessels?

- A. Shall be sent to the steamship company shore repair facility
- B. They are required to be overhauled by the ship's crew
- C. Shall be sent to a Coast Guard approved service facility
- D. They shall be sent to the Coast Guard for servicing

Correct answer: C

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

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

Correct answer: D

50. A Deratization Exemption Certificate is valid for which period of time?

- A. No time limit so long as Certificate of Sanitation is valid
- B. No time limit so long as no evidence of rodents aboard
- C. 1 year
- D. 6 months

Correct answer: D