

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

Master Less than 500-1600 Gross Registered Tons Rivers

Q387 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. Fire pumps shall be started and all exterior outlets opened.
  - B. All lifeboat equipment shall be examined.
  - C. All watertight doors in the vicinity of the drill shall be operated.
  - D. All of the above

Correct answer: C

2. How can you prevent the spread of fire by conduction?
- A. Close all openings to the area
  - B. Remove combustibles from direct exposure
  - C. Shut off all electric power
  - D. Cool the bulkheads around the fire

Correct answer: D

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. Flash point
  - C. Fire point
  - D. Autoignition temperature

Correct answer: D

4. Which may ignite fuel vapors?
- A. An open and running motor
  - B. Loose wiring
  - C. Static electricity
  - D. All of the above

Correct answer: D

5. Fires are grouped into what categories?
- A. Class A, B, C, and D
  - B. Type 1, 2, 3, and 4
  - C. Flammable solids, liquids, and gases
  - D. Combustible solids, liquids, and gases

Correct answer: A

6. What is the most vulnerable part of the fire main system?
- A. The fire pump
  - B. The hydrant valve
  - C. Exposed hard piping
  - D. The fire hose

Correct answer: D

7. Which action is routinely performed at the annual servicing and inspection of a dry chemical cartridge-operated portable fire extinguisher?
- A. Inspect and weigh the cartridge.
  - B. Pressure test the discharge hose.
  - C. Replace the dry chemical.
  - D. Test the pressure gauge for correct reading.

Correct answer: A

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

Correct answer: B

9. 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 attempt to coordinate with the Shipping Control Team
  - B. If on a coastwise voyage along the east coast of the U.S., you should put into the nearest port
  - C. You should only enter a port in the danger zone during hours of darkness
  - D. When over 200 miles from a port in the danger zone, you should not darken ship

Correct answer: A

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

Correct answer: B

11. If you must swim through an oil fire, which action should be avoided?
- A. Cover eyes with one hand when entering the water
  - B. Swim with the wind
  - C. Wear as much clothing as possible
  - D. Enter the water feet first

Correct answer: B

12. Oil fires are best extinguished by \_\_\_\_\_.
- A. cooling below the ignition temperature
  - B. cutting off the supply of oxygen
  - C. spraying with water
  - D. removing the fuel

Correct answer: B

13. 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. Batten down the engine room
- C. Start the fire pump
- D. Secure the fuel supply

Correct answer: D

14. A fire starts on your vessel while refueling. Which action should you take FIRST?

- A. Sound the general alarm
- B. Attempt to extinguish the fire
- C. Stop the ventilation
- D. Determine the source of the fire

Correct answer: A

15. You are approaching a disabled vessel in order to remove survivors from it. If your vessel drifts faster than the disabled vessel, how should you make your approach?

- A. At three times the drifting speed of the disabled vessel
- B. To windward of the disabled vessel
- C. Directly astern of the disabled vessel
- D. To leeward of the disabled vessel

Correct answer: B

16. 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. A pickup off the weather bow gives maximum maneuverability with the least possibility of injury to the man.
- D. You should stop to windward of the man and drift down on him.

Correct answer: C

17. 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. Increase speed to full to get the vessel away from the person
- B. Stop the propellers from turning and throw a ring buoy over the side
- C. First put the rudder hard over in either direction
- D. Immediately reverse the engines

Correct answer: B

18. Which is the primary element to successfully rescuing a man overboard?

- A. Good equipment
- B. A dedicated crew
- C. Well-conducted drills
- D. Good communication

Correct answer: C

19. You are approaching a ship that is broken down and are preparing to take her in tow. BEFORE positioning your vessel to pass the towline, which action should you take?

- A. Install chafing gear on the towline
- B. Compare the rate of drift between the ships
- C. Secure the bitter end of the towing hawser to prevent loss if the tow is slipped
- D. Have traveling lizards rigged to guide the towline while it is paid-out

Correct answer: B

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

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

Correct answer: C

21. Why is the height of a VHF radio antenna more important than the power output wattage of the radio?

- A. The air is more dense the higher you go
- B. Salt water is a poor conductor of sound
- C. VHF communications are basically "line of sight"
- D. Sea water absorbs the radiated energy

Correct answer: C

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

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

Correct answer: B

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

Correct answer: D

24. When should you use distress flares and rockets?

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

Correct answer: C

25. Which term describes the holes in the bulwark that allow deck water to drain into the sea?

- A. Swash ports
- B. Doggers
- C. Freeing ports
- D. Fidleys

Correct answer: C

26. The pillar shape that gives the greatest strength for the least weight is the \_\_\_\_\_.

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

Correct answer: D

27. Which term is used to describe the point that is halfway between the forward and after perpendicular and is a reference point for vessel construction?

- A. Center line
- B. Amidships
- C. Half length
- D. Mid-body

Correct answer: B

28. What term indicates the immersed body of the vessel aft of the parallel mid-body?

- A. Flow
- B. Stern
- C. Counter
- D. Run

Correct answer: D

29. 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. Loaded displacement
- C. Bale cubic
- D. Deadweight

Correct answer: D

30. Which describes the difference between the height of the metacenter and the height of the center of gravity of a vessel?

- A. Height of the center of buoyancy
- B. Height of the righting arm
- C. Metacentric height
- D. Fore and aft perpendicular

Correct answer: C

31. When the height of the metacenter is greater than the height of the center of gravity, the upright equilibrium position is stable and stability is \_\_\_\_\_.

- A. positive
- B. negative
- C. neutral
- D. unstable

Correct answer: A

32. 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 effort
- B. The center of buoyancy
- C. The center of flotation
- D. The center of gravity

Correct answer: B

33. When patching holes in the hull, how can pillows, bedding, and other soft materials be used?

- A. As strongbacks
- B. As shores
- C. As gaskets
- D. As wedges

Correct answer: C

34. What must be accurately determined to assess the potential for progressive flooding after a vessel has been damaged?

- A. The capacity of the water sprinkler systems
- B. The operation of the machinery space bilge level alarms
- C. The integrity of the watertight boundaries
- D. All of the above

Correct answer: C

35. Progressive flooding is controlled by securing watertight boundaries and which other action?

- A. Jettisoning cargo
- B. Transferring water ballast
- C. Plugging holes or openings
- D. Abandoning ship

Correct answer: C

36. On what type of pump would you find an impeller?

- A. Vane
- B. Centrifugal
- C. Piston
- D. Gear

Correct answer: B

37. What type of stern tube bearing has the least friction?

- A. Oil-lubricated bearings
- B. Hard rubber
- C. Lignum vitae
- D. Bronze bushings

Correct answer: A

38. What is the function of wearing rings found on some centrifugal pumps?

- A. Seal pump shaft against entry of air
- B. Absorb erosion of high-velocity discharge stream
- C. Isolate the outlet side from the inlet side
- D. Dampen the turbulent discharge flow

Correct answer: C

39. Which is TRUE of the term negative slip on a vessel?

- A. The distance a vessel travels when all propulsion has been stopped
- B. The ship is moving faster than the theoretical propeller speed
- C. The distance a vessel travels in the same direction when rudder has been applied
- D. The ship is moving slower than the theoretical propeller speed

Correct answer: B

40. When should the lubricating oil be changed on a heavy-duty diesel engine?

- A. When it has been in use for a specified interval
- B. When it no longer supports combustion
- C. When it gets dark in color
- D. Only when a sample rubbed between fingers feels thin

Correct answer: A



41. What factor is essential to the proper operation of a radiator cooled engine?

- A. Cooling water pressure
- B. Air flow through the radiator
- C. Jacket water treatment
- D. Low heat of combustion

Correct answer: B

42. Your vessel has been taking on water but now the breached hole has been repaired. Which effects can the flooding have on your vessel's GM?

- A. Flooding will neither increase or decrease GM
- B. Flooding can either increase or decrease GM
- C. Flooding will always increase GM
- D. Flooding will always decrease GM

Correct answer: B

43. What is the signal given to commence lowering the lifeboats?

- A. 3 short blasts of the ship's whistle
- B. 1 long blast of the ship's whistle
- C. 3 long blasts of the ship's whistle
- D. 1 short blast of the ship's whistle

Correct answer: D

44. In good weather, why should you deploy the sea anchor from the liferaft?

- A. To navigate against the current
- B. To keep the liferaft from capsizing
- C. It will keep personnel from getting seasick
- D. To stay in the general location to aid in rescue

Correct answer: D

45. What is the name given to the bottom row of plating next to the keel of a lifeboat?

- A. Sheer strake
- B. Bilge strake
- C. Garboard strake
- D. Keel rib

Correct answer: C

46. In which location are lifejackets required to be stowed?

- A. Locked watertight containers
- B. In the pumproom
- C. Readily accessible spaces
- D. In the forepeaks

Correct answer: C

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

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

Correct answer: C

48. On every vessel, where must distress signals be stowed?

- A. On or near the navigating bridge
- B. In an enclosed space below the freeboard deck away from heat
- C. Above the freeboard deck away from heat
- D. On the flying bridge not closer than 15 feet to any bulkhead

Correct answer: A

49. In general, how often are sanitary inspections of passenger and crew quarters made aboard passenger vessels in river service?

- A. Once each day
- B. Once each week
- C. Once each month
- D. Once each trip

Correct answer: C

50. Why is it desirable to have screens on the vents of potable water tanks?

- A. To stop insects from entering
- B. To prevent explosions
- C. To prevent backups
- D. To filter the incoming air

Correct answer: A