

U.S.C.G. Merchant Marine Exam
Mate of Unlimited Tonnage
Q309 Deck Safety
(Sample Examination)

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

1. An important step in fighting any electrical fire is to take which action?

- A. Stop ventilation
- B. Apply water to extinguish the fire
- C. De-energize the circuit
- D. Stop the vessel

Correct answer: C

2. Which types of portable fire extinguishers are designed for use on electrical fires?

- A. Foam (stored pressure) and soda-acid
- B. Carbon dioxide and foam (stored pressure)
- C. Dry chemical and carbon dioxide
- D. Dry chemical and soda-acid

Correct answer: C

3. In the illustration D041DG below, what does symbol 2 represent?

- A. Beam limit
- B. Bilge level
- C. Baseline
- D. Displacement

Correct answer: C

4. Which portable fire extinguisher is normally recharged in a shore facility?

- A. Carbon dioxide
- B. Dry chemical (cartridge-operated)
- C. Water (cartridge-operated)
- D. Water (pump tank)

Correct answer: A

5. You are operating a fire hose with an applicator attached. If you put the handle of the nozzle in the vertical position you will _____.

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

Correct answer: D

6. After a liferaft is launched, the operating cord _____.

- A. serves as a sea painter
- B. detaches automatically
- C. is cut immediately as it is of no further use
- D. is used to rig the boarding ladder

Correct answer: A

7. Which term describes the strengthening of damaged bulkheads by using wood or steel?

- A. Shoring
- B. Bracing
- C. Battening
- D. Blocking

Correct answer: A

8. 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

9. A deck-stowed 40-foot container is giving off smoke, and one end is discolored from heat. The cargo is valuable and easily damaged by water. You want to extinguish the fire without further damage if possible. What action should you take?

- A. Connect a portable line from the ship's fixed system and discharge CO₂ into the container.
- B. Flood the container with water and disregard any cargo damage as the fire threatens the entire vessel.
- C. Pierce the container and discharge 6 or more portable CO₂'s then add more CO₂ hourly.
- D. Cool the exterior of the container with water and close all vents; then keep it cooled until it can be off-loaded.

Correct answer: C

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

Correct answer: B

11. 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

12. Which is an advantage of an ABC dry chemical over a carbon dioxide extinguisher?

- A. Lack of toxicity
- B. Greater multipurpose extinguishing ability
- C. Burn-back protection
- D. Less damage to electrical components

Correct answer: B

13. Which vessel(s) is(are) required to comply with the vessel bridge-to-bridge radiotelephone regulations while navigating?

- A. All passenger vessels of 50 gross tons or less, carrying one or more passengers
- B. An intermittently manned floating plant under the control of a dredge
- C. Power-driven vessels 20 meters in length or longer
- D. All towing vessels 25 feet or less in length

Correct answer: C

14. You must shore up a bulkhead due to solid flooding forward. The bulkhead approximates a rectangle. Where should the center of pressure of the shores be located on the bulkhead?

- A. Approximately halfway up the bulkhead
- B. At the bottom of the bulkhead
- C. Approximately one-third of the way up the bulkhead
- D. Evenly over the surface of the bulkhead

Correct answer: C

15. You receive a call from the U.S. Coast Guard addressed to all stations. The call begins with the words "Pan-Pan" (3 times). Which type of emergency signal would this be?

- A. Safety signal
- B. Urgency signal
- C. Distress signal
- D. Red alert signal

Correct answer: B

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

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

Correct answer: D

17. What power source actuates a solenoid valve?

- A. Mechanical force
- B. Hydraulic pressure
- C. Air pressure
- D. Electric current

Correct answer: D

18. How can you indicate that your vessel is in distress?

- A. Continuously sounding the fog whistle
- B. Displaying three black balls in a vertical line
- C. Sounding five or more short and rapid blasts on the whistle
- D. Displaying a large red flag

Correct answer: A

19. You are preparing to take another vessel in tow. Which signal indicates, "Hawser is made fast"?

- A. Three white star rockets at 1-minute intervals
- B. An orange smoke signal
- C. Firing of a green star signal
- D. Firing of a red star signal

Correct answer: C

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

Correct answer: C

21. Which is the best action to take when plugging holes below the waterline for the safety of the vessel?

- A. Plug the largest holes first
- B. Eliminate all water entering the hole
- C. Only plug holes in machinery or other vital spaces
- D. Reduce the entry of water as much as possible

Correct answer: D

22. If a powdered aluminum fire is being fought, which is the most effective extinguishing agent to use?

- A. Steam
- B. CO2
- C. Water fog
- D. Dry powder

Correct answer: D

23. What is the traditional signal for fire aboard ship?

- A. More than 6 short blasts and 1 long blast on the whistle, and the same signal on the general alarm
- B. Alternating short and long blasts on the ship's whistle
- C. Continuous sounding of the ship's whistle and the general alarm for at least 10 seconds
- D. 1 short blast on the whistle

Correct answer: C

24. You are involved in an emergency landing of a helicopter on the water. When should you inflate your life jacket?

- A. Upon entering the helicopter
- B. Prior to reaching the water
- C. After exiting clear of the helicopter
- D. After reaching the water, but prior to exiting the helicopter

Correct answer: C

25. When electrical equipment is involved in a fire, where should the stream of dry chemicals be directed?

- A. Shot off a flat surface onto the flames
- B. Aimed at the source of the flames
- C. Used to shield against electrical shock
- D. Fogged above the equipment

Correct answer: B

26. When must an inflatable liferaft that has been repacked be overhauled and inspected at a U.S. Coast Guard approved service facility?

- A. Every six months
- B. Every twelve months
- C. Every eighteen months
- D. Every twenty-four months

Correct answer: B

27. 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

28. 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. Deadweight
- B. Gross tonnage
- C. Bale cubic
- D. Loaded displacement

Correct answer: A

29. What term indicates the outward curvature of the hull above the waterline?

- A. Sheer
- B. Deadrise
- C. Tumble home
- D. Flare

Correct answer: D

30. A man aboard a vessel, is signaling by raising and lowering his outstretched arms to each side. What does this signal indicate?

- A. Danger, stay away
- B. All is clear, it is safe to approach
- C. A distress signal
- D. All is clear, it is safe to pass

Correct answer: C

31. What is the breaking strength of the service lines of the rockets used with an impulse-projected, rocket type line throwing appliance?

- A. 300 lbs
- B. 500 lbs
- C. 1000 lbs
- D. 1500 lbs

Correct answer: B

32. Which statement(s) is(are) TRUE concerning the use of dry chemical extinguishers?

- A. You should direct the spray directly into the fire.
- B. You should direct the spray at a vertical bulkhead and allow it to flow over the fire.
- C. You should direct the spray at the base of the fire.
- D. On a weather deck approach the fire from the leeward side.

Correct answer: C

33. The two factors which make underwater hull repair difficult are accessibility and which other factor?

- A. The pressure exerted by the water
- B. The threat of progressive flooding
- C. The availability of tools
- D. The shape of the hull

Correct answer: A

34. What is LEAST likely to cause ignition of fuel vapors?

- A. Loose wiring
- B. Static electricity
- C. Explosion proof lights
- D. An open running electric motor

Correct answer: C

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

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

Correct answer: D

36. 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. The turn enables you to reverse course in the shortest possible time.
- B. You will be on a reciprocal course and nearly on the track-line run during the night.
- C. The turn provides the maximum coverage of the area to be searched.
- D. You have extra time to maneuver in attempting to close in on the man for rescue.

Correct answer: B

37. 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

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

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

Correct answer: A

39. The wooden plug inserted in the vent of a damaged tank should be removed if you are going to _____.

- A. use the crossover system
- B. abandon ship
- C. fight a fire
- D. pump from the damaged tank

Correct answer: D

40. 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. Williamson
- B. Anderson
- C. 180° turn
- D. Racetrack

Correct answer: A

41. When rendering assistance to personnel in the water a SAR helicopter utilizes a rescue sling for most extractions. In which case would the use of a litter be preferred?

- A. When the person is suffering from hypothermia
- B. When the person is not trained in the use of the rescue sling
- C. When the person is suffering from fatigue
- D. When the person has a pacemaker and static discharge is a concern

Correct answer: A

42. Immediately after abandoning a vessel, lookouts should be posted aboard liferafts to look for _____.

- A. bad weather
- B. food and water
- C. survivors in the water
- D. land

Correct answer: C

43. What is the minimum number of deck officers, able seaman or certificated persons required to command each lifeboat on a vessel in ocean service?

- A. Two
- B. Three
- C. Four
- D. Five

Correct answer: A

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

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

Correct answer: B

45. What should you do if you have transmitted a distress call a number of times on channel 16 and have received no reply?

- A. Key the microphone several times before transmitting again.
- B. Repeat the message using any other channel on which you might attract attention.
- C. Turn up the volume on the receiver before transmitting again.
- D. Report the problem to the head electrician.

Correct answer: B

- 46.** You have hand launched an inflatable liferaft. What should be one of your FIRST actions after all persons have boarded the liferaft?
- A. Cut the sea painter and clear the vessel.
 - B. Decide on food and water rations.
 - C. Open the equipment pack.
 - D. Inflate the liferaft floor.

Correct answer: A

- 47.** What is the generally accepted method of determining whether the atmosphere within a cargo tank is explosive, too rich, or too lean to support combustion?
- A. Send a gas sample ashore for laboratory analysis.
 - B. Use an explosimeter (Gas monitors).
 - C. Use the open flame test on a small sample that has been taken from the tank.
 - D. Enter the tank with an oxygen analyzer.

Correct answer: B

- 48.** How are fires in combustible metals, such as sodium or magnesium classified?
- A. Class A
 - B. Class B
 - C. Class C
 - D. Class D

Correct answer: D

- 49.** Each distress signal and self-activated smoke signal must be replaced not later than the marked date of expiration, or not more than how many months from the date of manufacture?
- A. 30 months
 - B. 36 months
 - C. 42 months
 - D. 48 months

Correct answer: C

- 50.** You are on watch and see a man fall overboard. Which man overboard turn should NOT be used in this situation?
- A. Single turn
 - B. Racetrack
 - C. Williamson
 - D. Scharnow

Correct answer: D

51. How is the "off-load" release system on a survival craft designed to be activated?

- A. It will activate when there is a load on the cable
- B. It will activate only when the engine is started
- C. It will activate when there is no load on the cable
- D. It will activate only when the doors are closed

Correct answer: C

52. Preventer bars are fitted on lifeboat releasing gear to prevent what from happening?

- A. Accidental unhooking when the falls become slack
- B. The falls from unhooking if the releasing gear is operated accidentally
- C. The falls from rehooking after they have been released
- D. The operation of the release lever until the boat is waterborne

Correct answer: A

53. Which statement describes the primary process by which fires are extinguished by dry chemical?

- A. The stream of dry chemical powder cools the fire.
- B. The dry chemical powder attacks the fuel and oxygen chain reaction.
- C. The dry chemical smothers the fire.
- D. The powder forms a solid coating over the surface.

Correct answer: B

54. 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, row steadily and swiftly as possible until land is reached
- 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, tripping the sea anchor from the stern while steadily rowing towards the beach

Correct answer: C

55. In heavy seas how should the helmsman steer the motor lifeboat?

- A. Into the seas slightly off the bow
- B. In the same direction as the seas
- C. Broadside to the seas
- D. In a series of figure-eights

Correct answer: A

56. After each reading of an oxygen indicator, the instrument should be purged with _____.

- A. the tested compartment's air
- B. CO₂
- C. fresh air
- D. water

Correct answer: C

57. Which type of weld testing can be used to detect internal flaws?

- A. Radiographic
- B. Chemical reaction
- C. Magnetic particle
- D. Dye penetrant

Correct answer: A

58. In illustration D014SA below, which item number correctly identifies the sea anchor?

- A. 1
- B. 12
- C. 14
- D. 18

Correct answer: D

59. As an extinguishing agent, foam _____.

- A. conducts electricity
- B. extinguishes by cooling oil fires below ignition temperature
- C. should be directed at the base of the fire
- D. is most effective on burning gases which are flowing

Correct answer: A

60. If you wear extra clothing when entering the water after abandoning ship it will accomplish which of the following?

- A. Help preserve body heat
- B. Reduce your body heat
- C. Make you more buoyant
- D. Make it more difficult to breathe

Correct answer: A

61. How should the number "3" be pronounced when spoken on the radiotelephone?

- A. TAY-RAH-TREE
- B. BEES-SOH-THREE
- C. TRIC-THREE
- D. NUM-ERL-THREE

Correct answer: A

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

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

Correct answer: C

- 63.** All personnel on board a vessel should be familiar with the rescue boat's _____.
- A. maintenance schedules
 - B. fuel consumption rates
 - C. navigational systems
 - D. boarding and operating procedure

Correct answer: D

- 64.** You have taken another vessel in tow. Which is an indicator that the towing speed is too fast?
- A. The towed vessel goes "in irons"
 - B. The catenary comes clear of the water
 - C. The tow line feels like it is "jumping" when touched
 - D. The vessels are not in step

Correct answer: B

- 65.** Where a propeller shaft passes through the hull, which device prevents water from entering the hull?
- A. Stuffing box
 - B. Stop-water
 - C. Propeller boss
 - D. Sea cock

Correct answer: A

- 66.** In each inflatable liferaft, what equipment is provided to make quick, emergency, temporary repairs to large holes in the raft?
- A. Self-adhesive rubberized canvas patches
 - B. No equipment is provided.
 - C. Several various-sized sealing clamps
 - D. Glue and rubber patches

Correct answer: C

- 67.** By day, what is the signal meaning, "This is the best place to land"?
- A. A white star rocket
 - B. Vertical motion of a red flag
 - C. Vertical motion of a white flag or the arms
 - D. A white smoke signal

Correct answer: C

- 68.** The atmosphere in a tank is too rich when it is _____.
- A. incapable of supporting combustion because the hydrocarbon vapor content makes the atmosphere below the LFL (Lower Flammable Level)
 - B. incapable of supporting combustion because the hydrocarbon vapor content makes the atmosphere above the UFL (Upper Flammable Limit)
 - C. in a noncombustible state which can be relied on to occur naturally on a regular basis
 - D. capable of supporting combustion

Correct answer: B

- 69.** When transferring survivors from an enclosed lifeboat to a rescue vessel, personnel on board the boat should take which action?
- A. Climb on top of the boat while waiting for their turn to transfer to the rescue vessel
 - B. Enter the water and swim over to the rescue vessel
 - C. Remain seated inside and make the transfer one person at a time
 - D. Remove their life preservers to make it easier to climb on board the rescue vessel

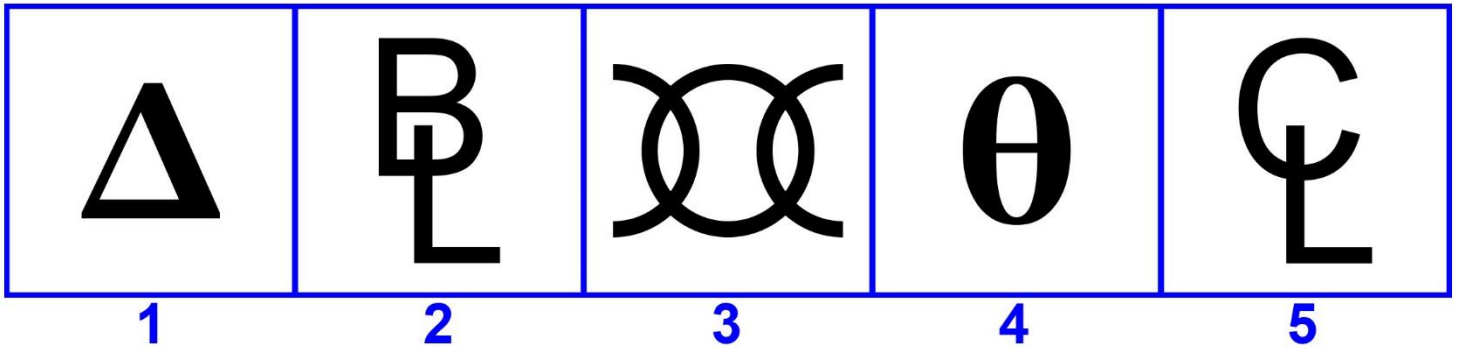
Correct answer: C

- 70.** 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 year
 - B. Twice a year
 - C. Once a week
 - D. Once a month

Correct answer: D



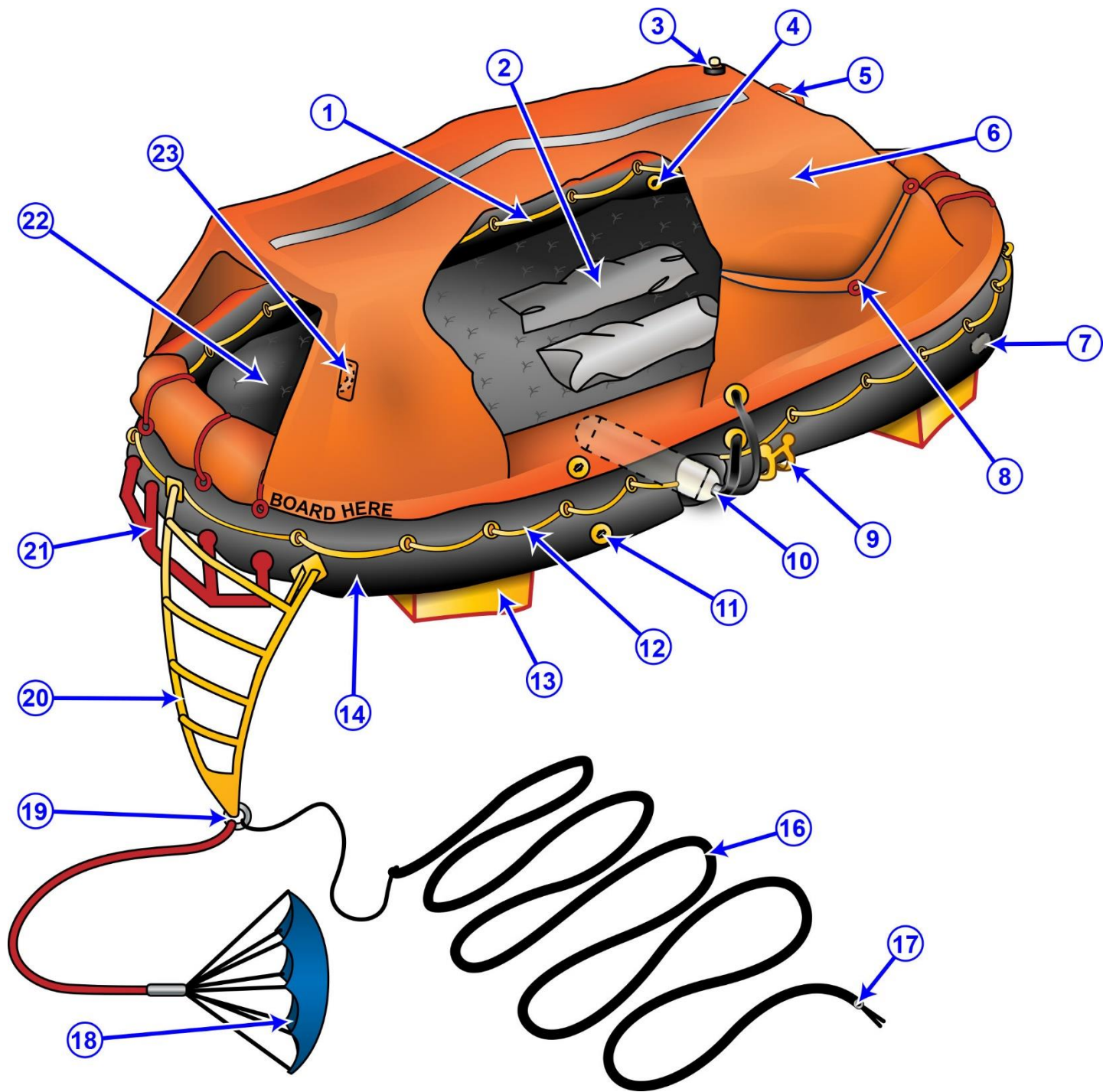
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