

U.S.C.G. Merchant Marine Exam

Mate Less than 500-1600 Gross Registered Tons

Q137 Deck Safety

(Sample Examination)

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

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

Correct answer: C

2. The terms "ceiling" and "margin plate" are associated with which areas of the vessel?
- A. The tank top
 - B. The engine room
 - C. The main deck
 - D. The crew's quarters

Correct answer: A

3. In illustration D039SA below, which Fire Control Plan symbol represents the best means to extinguish a LARGE Class Bravo fire on deck?
- A. 44
 - B. 39
 - C. 36
 - D. 14

Correct answer: D

4. 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. Buoyancy
 - C. The camber
 - D. The draft

Correct answer: A

5. Which causes spontaneous combustion?
- A. An outside heat source heating a substance until it ignites
 - B. The conduction of heat through a wall of material to the substance
 - C. A chemical action within a substance
 - D. All of the above

Correct answer: C

6. You are in a lifeboat broadcasting a distress message. What information would be essential to your rescuers?
- A. Number of persons aboard
 - B. The nature of the distress
 - C. Your position by latitude and longitude
 - D. All of the above

Correct answer: D

7. Distress signals may be _____.
- A. red flares
 - B. sound signals
 - C. smoke signals
 - D. Any of the above

Correct answer: D

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

Correct answer: D

9. What power source actuates a solenoid valve?
- A. Mechanical force
 - B. Electric current
 - C. Hydraulic pressure
 - D. Air pressure

Correct answer: B

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

Correct answer: A

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

Correct answer: C

12. Which term is used to describe the horizontal port or starboard movement of a vessel?

- A. Yaw
- B. Heave
- C. Surge
- D. Sway

Correct answer: D

13. The vessel shown in illustration D025DG has broken down and you are going to take her in tow. The wind is on her starboard beam. Both vessels are making the same amount of leeway. Where should you position your vessel when you start running lines?

- A. A
- B. B
- C. C
- D. D

Correct answer: C

14. A motor lifeboat shall carry sufficient fuel to operate continuously for a period of which duration?

- A. 12 hours
- B. 18 hours
- C. 24 hours
- D. 36 hours

Correct answer: C

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

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

Correct answer: B

16. While underway in thick fog you are on watch and hear the cry "man overboard". Which type of maneuver should you make?

- A. Williamson turn
- B. figure eight turn
- C. Racetrack turn
- D. Round turn

Correct answer: A

- 17.** The SS AMERICAN MARINER has drafts of: FWD 16'-10", AFT 19'-04". Use the white pages of the Stability Data Reference Book to determine the drafts if you ballast the forepeak with 73 tons of seawater.
- A. FWD 17'-07.4", AFT 18'-09.2"
 - B. FWD 17'-06.8", AFT 18'-09.8"
 - C. FWD 17'-05.8", AFT 18'-10.9"
 - D. FWD 17'-06.2", AFT 18'-10.4"

Correct answer: C

- 18.** The Master of a cargo or tank vessel shall be responsible that each lifeboat, except those free-fall launched, is lowered to the water with crew and maneuvered. Which time interval is this action required?
- A. Once a week
 - B. Once a month
 - C. Once every three months
 - D. Once a year

Correct answer: C

- 19.** What is the spoken emergency signal for a distress signal over a VHF radio?
- A. Mayday
 - B. Pan
 - C. Security
 - D. Red Alert

Correct answer: A

- 20.** What is the meaning of the signal VJ 8 when sent by the International Code of Signals?
- A. You should stop hauling your warps.
 - B. Winds of force 8 are expected.
 - C. A gale is expected from the north.
 - D. Low clouds cover 8 octants of the sky.

Correct answer: C

- 21.** Oily rags stored in a pile that is open to the atmosphere are a hazard because they may _____.
- A. deteriorate and give off noxious gasses
 - B. attract lice and other vermin and serve as a breeding ground
 - C. spontaneously heat and catch fire
 - D. None of the above

Correct answer: C

- 22.** The operating cord on an inflatable liferaft should be renewed by _____.
- A. an approved servicing facility ashore
 - B. leaving the original line and tying another one to it so the two lines will take the strain
 - C. cutting the line where it enters the case and replacing that portion
 - D. removing the top half of the shell, cutting the line at its source, and renewing completely

Correct answer: A

23. Which is the normal tendency for a loaded tanker?

- A. Hog
- B. To be very tender
- C. Sag
- D. Have a permanent list

Correct answer: C

24. CATEGORY I EPIRB's transmit on frequencies that are monitored by _____.

- A. private, commercial, and military aircraft
- B. orbiting satellites in space
- C. commercial radio stations
- D. Both A & C

Correct answer: B

25. A fire starts in a switchboard due to a short circuit. This is which class of fire?

- A. Class A
- B. Class B
- C. Class C
- D. Class D

Correct answer: C

26. When hoisting a boat on gravity type davits using an electric motor driven winch, the davit arms should be brought up to which position?

- A. Until just before they make contact with the limit switch, and then hand cranked to their final position
- B. To the embarkation deck, and then hand cranked to their final position
- C. To the bar stop, and then hand cranked to their final position
- D. To their final position with the winch operating at slow speed

Correct answer: A

27. The all-purpose nozzle will produce a fog spray when you take which action?

- A. Pull the nozzle handle all the way back toward the operator
- B. Push the nozzle handle forward as far as it will go
- C. Pull the nozzle handle back to a position where the handle is perpendicular to the plane of the nozzle
- D. Insert a fog applicator between the fire hose and nozzle

Correct answer: C

28. You hear on the radiotelephone the word "Securite" spoken three times. What does this indicate?

- A. The sender is in distress and requests immediate assistance
- B. A message of an urgent nature about the safety of a ship will follow
- C. A message about the safety of navigation will follow
- D. You should secure your radiotelephone

Correct answer: C

29. Stable equilibrium for a vessel means that the metacenter is at which location?

- A. At a lower level than the baseline
- B. At a position amidships
- C. Higher than the center of gravity
- D. On the longitudinal centerline

Correct answer: C

30. Which extinguishing agent is most effective on a mattress fire?

- A. Dry Chemical
- B. Halon
- C. CO₂
- D. Water

Correct answer: D

31. You are fighting a fire in a cargo hold on 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. Draining firefighting water and pumping it overboard
- C. Shutting off electricity to damaged cables
- D. Removing burned debris from the cargo hold

Correct answer: B

32. If your vessel has a GM of one foot and a breadth of 50 feet, what is your vessel's estimated rolling period?

- A. 20 seconds
- B. 11 seconds
- C. 15 seconds
- D. 22 seconds

Correct answer: D

33. How should the number "1" be pronounced when spoken on the radiotelephone?

- A. NUM-EV-WUN
- B. NEW-MAL-WON
- C. OO-NAH-WUN
- D. OO-NO

Correct answer: C

34. When a vessel is stationary and in a hogging condition, the main deck is under which stress?

- A. Shear stress
- B. Racking stress
- C. Compression stress
- D. Tension stress

Correct answer: D

35. Which type of EPIRB must each ocean-going ship carry?

- A. Class A
- B. Class C
- C. Category 1
- D. Class B

Correct answer: C

36. Which is TRUE concerning the production of mechanical foam by a portable in-line foam proportioner?

- A. A portable in-line foam proportioner increases the rate of foam production
- B. A portable in-line foam proportioner increases the size of foam bubbles formed
- C. The unit gives the nozzleman more freedom of movement, since it can be placed anywhere in the hose line
- D. A portable in-line foam proportioner improves the extinguishing properties of foam

Correct answer: C

37. 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

38. On the fire control plans, in illustration D039SA below, the CO2 bottle room is designated by which symbol?

- A. 42
- B. 9
- C. 8
- D. 7

Correct answer: A

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. You are in a survival craft broadcasting a distress message. What information would be essential to your rescuers?

- A. Your radio call sign
- B. The nature of the distress
- C. Your position by latitude and longitude
- D. The time of day

Correct answer: C

41. Your vessel is listing because of a negative GM. To lower G below M, which action should you take?

- A. Deballast double bottoms
- B. Add weight symmetrically below G
- C. Ballast on the high side
- D. Transfer weight to the high side

Correct answer: B

42. You are reading the draft marks as shown in illustration D032DG. The water level is at the bottom of number 11. What is the draft?

- A. 11'-00"
- B. 10'-06"
- C. 10'-09"
- D. 11'-06"

Correct answer: A

43. Which satellite system promulgated Maritime Safety Information?

- A. NAVTEX
- B. AMVER
- C. INMARSAT-M SES
- D. SafetyNET

Correct answer: D

44. A vessel with a large GM will _____.

- A. tend to ship water on deck in heavy weather
- B. be subject to severe racking stresses
- C. be less likely to have cargo shift
- D. have a small amplitude of roll in heavy weather

Correct answer: B

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

Correct answer: C

46. On the all-purpose nozzle, what is the position of the nozzle valve when the handle is all the way forward?

- A. fog
- B. solid stream
- C. shut
- D. spray

Correct answer: C

47. A fire of escaping liquefied flammable gas is best extinguished by which action?

- A. Interrupting the chain reaction
- B. Cutting off the supply of oxygen
- C. Cooling the gas below the ignition point
- D. Stopping the flow of gas

Correct answer: D

48. AMVER is a system which as its main goal is to provide which information?

- A. Navigational information
- B. Satellite communications
- C. Weather information
- D. Vessel position reporting service

Correct answer: D

49. Which term describes the horizontal fore or aft motion of a vessel?

- A. Sway
- B. Roll
- C. Pitch
- D. Surge

Correct answer: D

50. The SS AMERICAN MARINER is ready to bunker with drafts of FWD 21'-04", AFT 26'-04". After all bunkers are on board, soundings indicate the tonnages shown in table ST-0170 below. Use the white pages of The Stability Data Reference Book to determine the free surface correction.

ST-0170

| | | | |
|----------|-------|----------|-------|
| DB 1 CL | 48.2 | DB 6 P | 87.0 |
| DB 1A CL | 81.9 | DB 6 S | 87.0 |
| DB 2 P | 71.2 | DB 7 P | 66.2 |
| DB 2 S | 71.2 | DB 7 S | 58.4 |
| DB 3 CL | 227.6 | DT 1 | 84.2 |
| DB 3 P | 55.6 | DT 1A CL | 235.6 |
| DB 3 S | 55.6 | DT 3 P | 86.1 |
| DB 4 CL | 224.1 | DT 3 S | 86.1 |
| DB 4 P | 128.1 | DT 6 P | 201.2 |
| DB 4 S | 128.1 | DT 6 S | 201.2 |
| DB 5 CL | 196.2 | DT 7 P | 128.8 |
| DB 6 CL | 242.3 | DT 7 S | 128.8 |

- A. 0.54 ft
- B. 0.62 ft
- C. 0.80 ft
- D. 0.85 ft

Correct answer: A

51. Which of the following describes the inspection and testing requirements of a SART?

- A. Bi-annual inspections and monthly testing
- B. Monthly inspections and monthly testing
- C. Monthly inspections and bi-annual testing
- D. Bi-annual inspections and semi-annual testing

Correct answer: B

52. What is the difference between the starboard and port drafts due to the wind or seas called?

- A. Heel
- B. Trim
- C. List
- D. Flotation

Correct answer: A

53. Your vessel displaces 564 tons. The existing deck cargo has a center of gravity of 1.5 feet above the deck and weighs 41 tons. If you load 22 tons of ground tackle with an estimated center of gravity of 2.5 feet above the deck, what is the final height of the CG of the deck cargo?

- A. 1.62 feet
- B. 1.85 feet
- C. 2.10 feet
- D. 2.46 feet

Correct answer: B

54. What is the radiotelephone urgency signal?

- A. MAYDAY
- B. PAN PAN
- C. SEELONCE FEENE
- D. SECURITE

Correct answer: B

55. 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. To the forward part of the deckhouse
- B. To the base of the foremast
- C. At the stern
- D. To the forwardmost bitts

Correct answer: D

56. You are at sea in an inflatable liferaft. In high latitudes, which presents the greatest danger?

- A. Asphyxiation due to keeping the canopy closed
- B. Hypothermia caused by cold temperature
- C. Collapse of the raft due to cold temperatures
- D. Starvation

Correct answer: B

- 57.** Your vessel has been damaged and is partially flooded. The first step to be taken in attempting to save the vessel is to _____.
- A. pump out the water inside the vessel
 - B. establish flooding boundaries and prevent further spread of flood water
 - C. calculate the free surface effect and lost buoyancy to determine the vessel's stability
 - D. plug the hole(s) in the outer shell

Correct answer: B

- 58.** Which categories of NAVTEX messages may not be selectively rejected through receiver programming?
- A. Navigational warnings
 - B. Weather warnings
 - C. SAR information
 - D. All of the above

Correct answer: D

- 59.** What is the MOST important consideration when determining how to fight an electrical fire?
- A. The amount of toxic fumes created by the extinguisher
 - B. Maintaining electrical power
 - C. Danger of shock to personnel
 - D. Whether the fire is in machinery or passenger spaces

Correct answer: C

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

Correct answer: B

- 61.** The most detrimental effect on initial stability is a result of liquids _____.
- A. flowing from fore to aft within a vessel
 - B. flowing from side to side within the vessel
 - C. pocketing in a slack tank as a vessel heels
 - D. flowing in and out of a holed wing tank

Correct answer: D

62. In ship construction, which is TRUE concerning frame spacing?

- A. Spacing is uniform over the length of the vessel
- B. Spacing is reduced at the bow and stern
- C. Spacing is uniform over the length of the vessel, with the exception of the machinery spaces, where it is reduced due to increased stresses
- D. Spacing is greater at the bow and stern

Correct answer: B

63. 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

64. 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. Red
- D. Green

Correct answer: C

65. A self-righting survival craft will return to an upright position provided that all personnel _____.

- A. are seated with seat belts on and doors open
- B. escape from the craft
- C. are seated with seat belts on and doors shut
- D. are to shift to one side to right it

Correct answer: C

66. 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 gravity
- D. The center of flotation

Correct answer: B

67. Which item is of the most use in getting a lifeboat away from a moving ship?

- A. Sea painter
- B. The falls
- C. Boat hook
- D. Fleming Gear

Correct answer: A

68. The gross weight of a fully charged CO2 cylinder is 80 lbs. When the bottle is empty it weighs 60 lbs. What is the minimum acceptable gross weight of the CO2 bottle before it should be recharged by the manufacturer?

- A. 55 lbs
- B. 68 lbs
- C. 78 lbs
- D. 82 lbs

Correct answer: C

69. You are fighting a fire in the electrical switchboard in the engine room. You should secure the power, then take which action?

- A. Use a low-velocity fog adapter with the fire hose
- B. Determine the cause of the fire
- C. Use a portable CO2 extinguisher
- D. Use a portable foam extinguisher

Correct answer: C

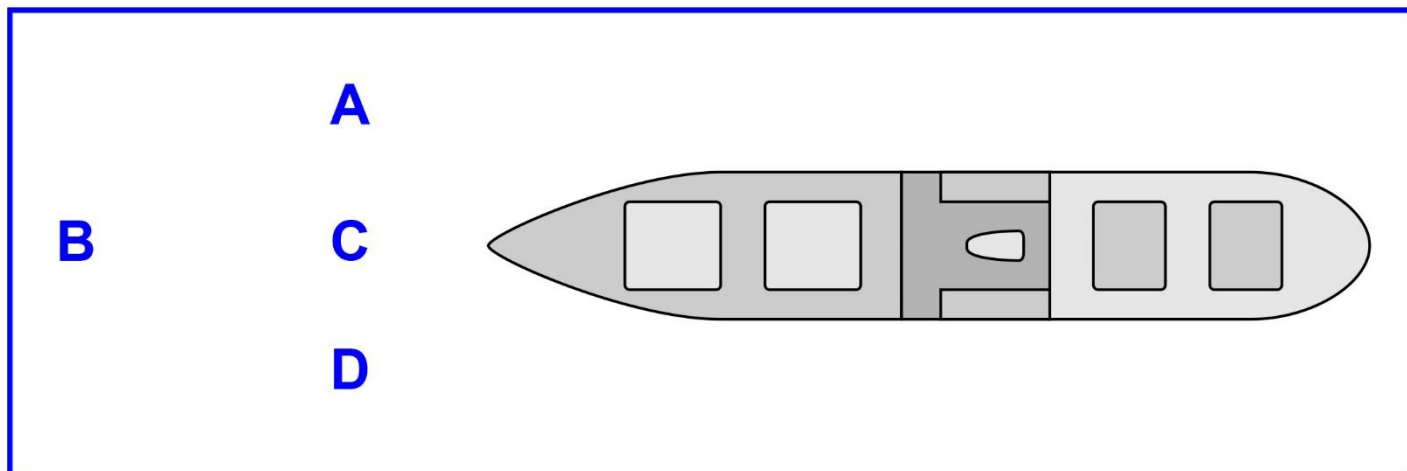
70. What is the required minimum length of the painter for a lifeboat in ocean service?

- A. 60 fathoms
- B. Two times the distance from the stowage position of the boat to the light waterline or 50 feet whichever is greater
- C. Twice the distance from the main deck to the light waterline or 50 feet whichever is greater
- D. The distance from the main deck to the light waterline

Correct answer: B



D025DG





D032DG

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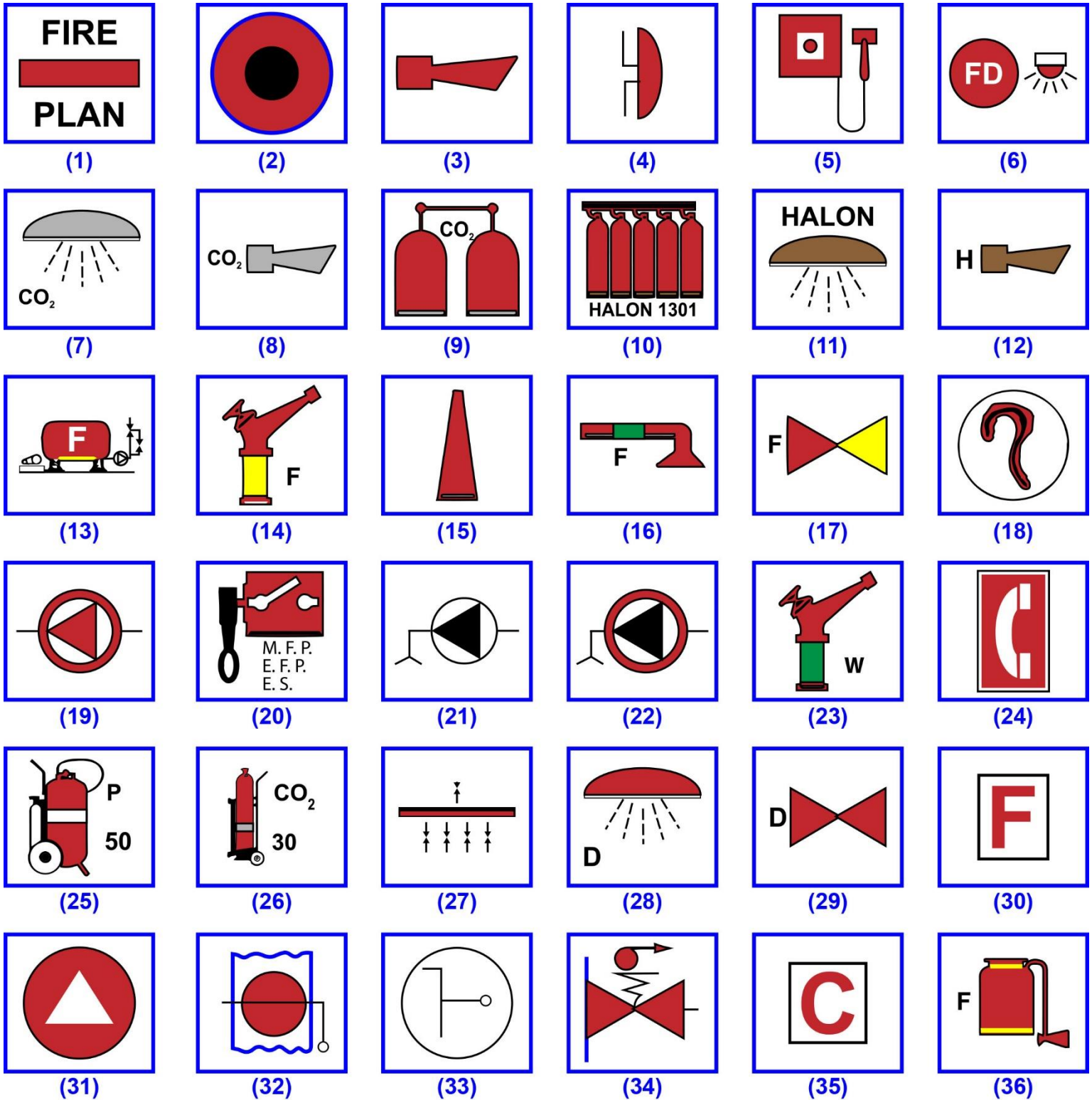
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MARKS**

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**FWD DRAFT
MARKS**



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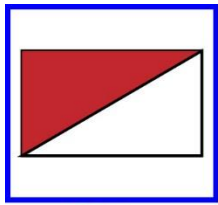


Adapted for testing purposes only from Graphical Symbols for Shipboard Fire Control Plans
IMO Resolution A.952(23) Adopted 2003

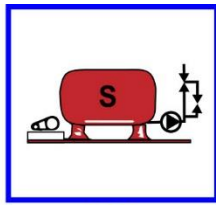
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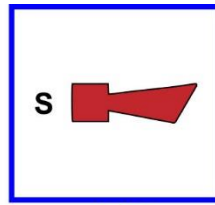
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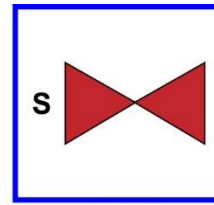
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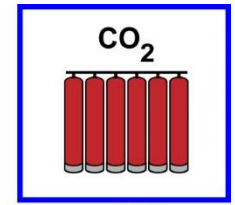
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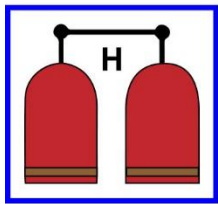
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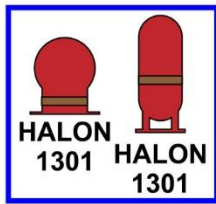
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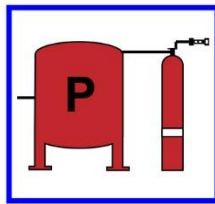
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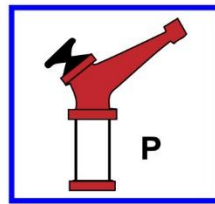
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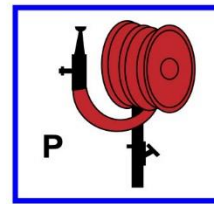
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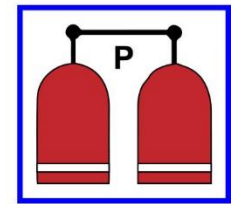
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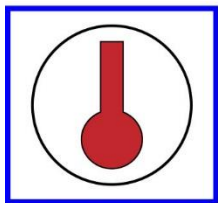
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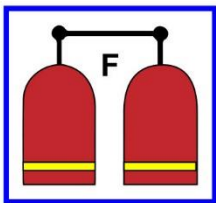
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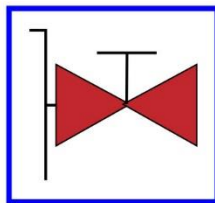
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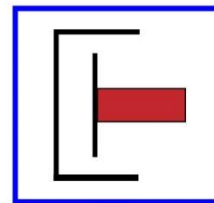
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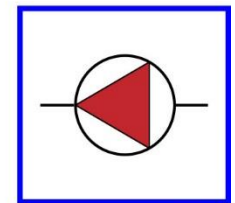
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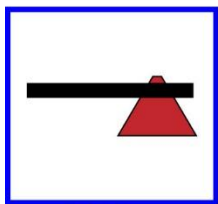
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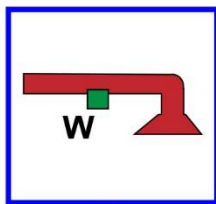
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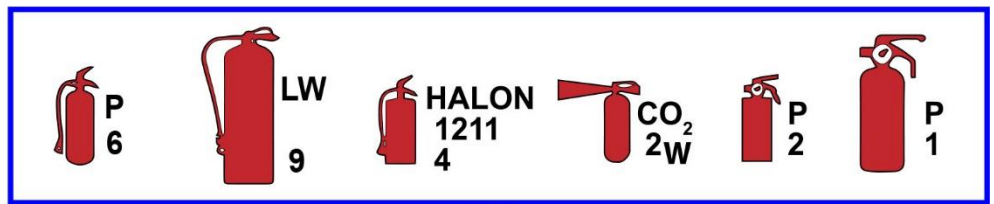
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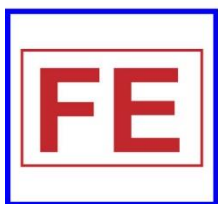
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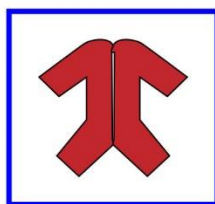
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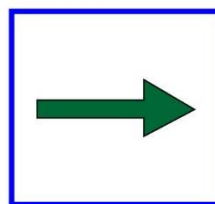
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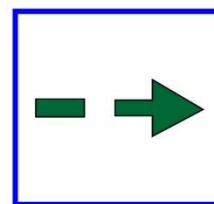
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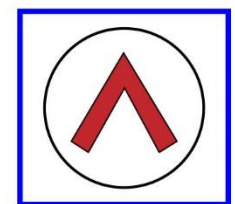
(60)



(61)



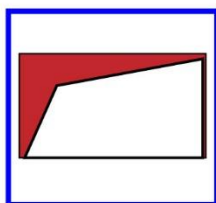
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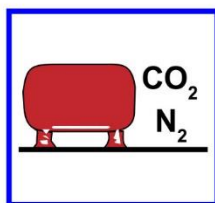
(63)



(64)



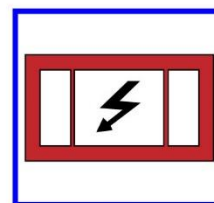
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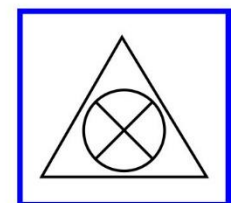
(66)



(67)



(68)



(69)

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