

U.S.C.G. Merchant Marine Exam
Mate Offshore Supply Vessels
Q210 Deck Safety
(Sample Examination)

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

1. Large volumes of carbon dioxide are safe and effective for fighting fires in enclosed spaces, such as in a pumproom, provided that the _____.
- A. persons in the space wear gas masks
 - B. persons in the space wear damp cloths over their mouths and nostrils
 - C. ventilation system is kept operating
 - D. ventilation system is secured and all persons leave the space

Correct answer: D

2. Which portable fire extinguisher should be used on a class C fire on board a vessel?
- A. Water (stored pressure)
 - B. Carbon tetrachloride
 - C. Foam
 - D. Carbon dioxide

Correct answer: D

3. When a vessel's LCG is aft of her LCB, how will the vessel respond?
- A. The vessel will be on an even keel
 - B. The vessel will be trimmed by the stern
 - C. The vessel will be trimmed by the head
 - D. The vessel will have a list

Correct answer: B

4. The vessel's Emergency Position Indicating Radio beacon (EPIRB) must be tested at which time interval?
- A. Weekly
 - B. Monthly
 - C. Every 3 months
 - D. Every 2 months

Correct answer: B

5. When abandoning ship, after launching the motor lifeboat which is the recommended action to take?
- A. Go in one direction until fuel runs out
 - B. Take a vote on which direction you should go
 - C. Plot a course for the nearest land
 - D. Stay in the immediate area

Correct answer: D

6. Which is the normal tendency for a loaded tanker?
- A. Sag
 - B. Have a permanent list
 - C. Hog
 - D. To be very tender

Correct answer: A

7. Which statement about AMVER reports is TRUE?
- A. In the body of the sailing plan report, the letter G is used to indicate a great circle course.
 - B. The sailing plan may be sent in any reasonable time before departure, but not later than 12 hours after departure.
 - C. Distress messages should be sent to the AMVER center.
 - D. There are four different message reports in the AMVER system.

Correct answer: D

8. A vessel's bottom will be subjected to tension when weight is concentrated in which location(s)?
- A. Aft
 - B. Amidships
 - C. At both ends of the vessel
 - D. Forward

Correct answer: B

9. In illustration D039SA below, which Fire Control Plan symbol represents a heat detector?
- A. 18
 - B. 31
 - C. 49
 - D. 63

Correct answer: C

10. Angular motion about the vertical axis of a vessel refers to which term?
- A. Surge
 - B. Sway
 - C. Yaw
 - D. Roll

Correct answer: C

11. Which extinguishing agent is the best for use on electrical fires?
- A. Dry chemical
 - B. Foam
 - C. CO₂
 - D. Water fog

Correct answer: C

12. 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. Whether the fire is in machinery or passenger spaces
 - C. Danger of shock to personnel
 - D. Maintaining electrical power

Correct answer: C

13. Which factor has the greatest effect on the value of the free surface correction?

- A. The draft of the vessel
- B. The specific gravity of the liquid in the tank
- C. The length of the tank
- D. The width of the tank

Correct answer: D

14. Which statement about bilge keels is CORRECT?

- A. They are critical strength members and require careful design consideration.
- B. They attach to a low stress area.
- C. They provide support when the vessel is dry docked.
- D. They increase resistance to rolling.

Correct answer: D

15. A wooden plug fitted tightly in the vent of a damaged tank may prevent which situation?

- A. The tank developing free surface
- B. The tank from collapsing
- C. The tank filling completely
- D. Developing free surface moment

Correct answer: C

16. A fire in the galley ALWAYS poses which additional threat?

- A. The contamination of food with extinguishing agent
- B. Causing loss of stability
- C. A grease fire in the ventilation system
- D. Spreading through the engineering space

Correct answer: C

17. You are underway in the Gulf of America when you hear a distress message over the VHF radio. The position of the sender is about 20 miles south of Galveston, TX, and you are about 80 miles ESE of Galveston. What action should you take?

- A. Immediately acknowledge receipt of the distress message
- B. Defer acknowledgment for a short interval so that a coast station may acknowledge receipt
- C. Do not acknowledge receipt until other ships nearer to the distress have acknowledged
- D. Do not acknowledge receipt because you are too far away to take action

Correct answer: B

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

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

Correct answer: C

19. While operating off Panama a seaman is injured. What indicator should be included in the preamble of a radio telegram requesting medical advice from a Panamanian station?

- A. XXX
- B. MEDRAD
- C. DH MEDICO
- D. RADIO MEDICAL

Correct answer: C

20. When launching a lifeboat, how should the tricing pennants be released?

- A. After the boat is released into the water
- B. Before the boat is lowered from the stowed position
- C. As the boat-fall blocks break clear of the davit head
- D. Before the boat is lowered from the embarkation level

Correct answer: D

21. You are reading the draft marks as shown in illustration D032DG. The water level forward leaves about 4 inches of the 11 visible, and the water level aft is at the top of the 10. What is the mean draft?

- A. 10'-06"
- B. 10'-08"
- C. 10'-10"
- D. 11'-02"

Correct answer: C

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

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

Correct answer: A

23. What is the name given to the strake on each side of the keel?

- A. Sheer strake
- B. Garboard strake
- C. Insulation strake
- D. Gatewood strake

Correct answer: B

24. Where is the knife on an inflatable liferaft always located?

- A. In a pocket on the first aid kit
- B. On a cord hanging from the canopy
- C. In a special pocket near the entrance
- D. In one of the equipment bags

Correct answer: C

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

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

Correct answer: D

26. What is the purpose of a striking plate?

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

Correct answer: B

27. If you receive the signal over radiotelephone of "Romeo Papa Tango" while using the International Code of Signals, which action should you take?

- A. End the transmission
- B. Continue since he received your last transmission
- C. Report to the caller
- D. Repeat your last transmission

Correct answer: D

28. What is the report identifier code for an AMVER deviation report?

- A. PR
- B. FR
- C. DV
- D. DR

Correct answer: D

29. Where are the lifelines connected to the liferaft?

- A. At the stern
- B. In the middle
- C. At the bow
- D. All around

Correct answer: D

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

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

Correct answer: B

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

Correct answer: D

32. Which maneuver will return your vessel to a person who has fallen overboard in the shortest time?
- A. A Williamson Turn
 - B. Make two 180° turns
 - C. A single turn with hard rudder
 - D. Put the engine(s) crash astern, no turn

Correct answer: C

33. 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. She is making more leeway than you. Where should you position your vessel when you start running lines?
- A. A
 - B. B
 - C. C
 - D. D

Correct answer: D

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

Correct answer: D

35. 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. If on a coastwise voyage along the east coast of the U.S., you should put into the nearest port
 - D. You should attempt to coordinate with the Shipping Control Team

Correct answer: D

36. A partially full tank causes a virtual rise in the height of the _____.
- A. center of flotation
 - B. center of buoyancy
 - C. center of gravity
 - D. metacenter

Correct answer: C

37. When shoring a damaged bulkhead, effort should be taken to spread the pressure over the _____.

- A. nearest longitudinal girder
- B. maximum possible area
- C. minimum possible area
- D. nearest watertight door

Correct answer: B

38. When approaching a fire from windward, you should shield firefighters from the fire by using which method?

- A. High-velocity fog
- B. A straight stream of water
- C. Low-velocity fog
- D. Foam spray

Correct answer: C

39. Which is TRUE concerning the painter of an inflatable liferaft?

- A. Staged for free running on the deck
- B. Stowed under the raft to protect from the elements
- C. Faked out next to the case on deck
- D. Secured to permanent object on deck via weak link

Correct answer: D

40. The capacity of any liferaft on board a vessel can be determined by _____.

- A. examining the plate on the outside of the raft container
- B. referring to the Muster List ("Station Bill")
- C. examining the Certificate of Inspection
- D. referring to the shipping articles

Correct answer: A

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

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

Correct answer: A

42. A right-handed propeller will cause the survival craft to _____.

- A. walk the stern to starboard in reverse
- B. walk the stern to port in reverse
- C. run faster than a left-handed propeller
- D. right itself if capsized

Correct answer: B

43. Which statement is TRUE concerning carbon dioxide?

- A. It is used on class B and C fires.
- B. It is heavier than air.
- C. It is non-conductive.
- D. All of the above are true.

Correct answer: D

44. What are the most important reasons for using water fog to fight fires?

- A. Cools fire and adjacent surfaces, provides protective barrier
- B. Smothers burning surfaces, organically destroys fuel
- C. Allows fire to be attacked from leeward, saturates liquid surfaces
- D. Reaches areas not protected by steam or CO₂ smothering systems

Correct answer: A

45. In weighing CO₂ cylinders, they must be recharged if weight loss exceeds which amount?

- A. 10% of weight of full bottle
- B. 20% of weight of charge
- C. 15% of weight of full bottle
- D. 10% of weight of charge

Correct answer: D

46. When abandoning ship and jumping into the water from a substantial height without a life jacket, you should _____.

- A. dive headfirst, using your hands to break the surface of the water
- B. jump feet first, covering your nose and mouth with one hand and grasping the opposing upper arm with the other
- C. jump feet first, holding your knees to your chest
- D. hold your arms firmly at your sides and jump feet first

Correct answer: B

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

- A. The ship is moving faster than the theoretical propeller speed
- B. The distance a vessel travels when all propulsion has been stopped
- 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: A

48. Which advantage does dry chemical have over carbon dioxide (CO₂) in firefighting?

- A. Compatible with all foam agents
- B. More protective against re-flash
- C. Cleaner
- D. All of the above

Correct answer: B

49. Which type of fire is the foam (stored-pressure type) fire extinguisher effective on?

- A. Classes A & B
- B. Classes A & C
- C. Classes B & C
- D. All of the above

Correct answer: A

50. 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

51. 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. They should slip simultaneously
- B. The towing vessel should slip first
- C. The vessel towed should slip first
- D. Either vessel may slip first

Correct answer: B

52. You are on a ship that has broken down and are preparing to be taken in tow. You will use your anchor cable as part of the towline. Which statement is TRUE?

- A. The anchor cable should be veered enough to allow the towline connection to be immediately astern of the towing vessel.
- B. The anchor cable should be led out through a chock, if possible, to avoid a sharp nip at the hawsepipe lip.
- C. The anchor cable should be veered enough to allow the towline connection to be just forward of your bow.
- D. The strain of the tow is taken by the riding pawl, chain stopper, and anchor windlass brake.

Correct answer: D

53. 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

54. Which signal should be used to send the group "Distance 750 nautical miles"?

- A. D750
- B. D750N
- C. R750
- D. R750N

Correct answer: C

55. CO2 cylinders must be recharged when the weight of the charge in the cylinder is less than what percent of the stamped full weight of the charge?

- A. 80%
- B. 85%
- C. 90%
- D. 95%

Correct answer: C

56. Pitching is angular motion of the vessel about what axis?

- A. Centerline
- B. Vertical
- C. Transverse
- D. Longitudinal

Correct answer: C

57. What term indicates an inward curvature of the ship's hull above the waterline?

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

Correct answer: B

58. Small hull leaks can be temporarily repaired by _____.

- A. seizing
- B. parbuckling
- C. caulking
- D. parceling

Correct answer: C

59. What is the standard rate of signaling by flashing light?

- A. Twenty letters per minute
- B. Forty letters per minute
- C. Fifty letters per minute
- D. Thirty letters per minute

Correct answer: B

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

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

Correct answer: C

61. What is the weight of the liquid displaced by a vessel floating in sea water equal to?

- A. The reserve buoyancy
- B. The displaced volume
- C. The weight required to sink the vessel
- D. The total weight of the vessel

Correct answer: D

62. Which defines the "flammable limits" of an atmosphere?

- A. The two temperatures between which an atmosphere will burn if an ignition source is present
- B. The two temperatures between which an atmosphere will self-ignite
- C. The upper and lower percentage of vapor concentrations in an atmosphere which will burn if an ignition source is present
- D. The upper and lower pressures between which an atmosphere will not burn

Correct answer: C

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

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

Correct answer: A

64. When lowering lifeboats in heavy seas, a good practice is to rig frapping lines which way?

- A. Rig with fore and aft as well as a thwartship lead
- B. Rig only on the after falls
- C. Rig the falls from the main deck of the vessel
- D. Rig only on the forward falls

Correct answer: A

65. How can the spread of fire be prevented?

- A. Shutting off the oxygen supply
- B. Removing combustibles from the endangered area
- C. Cooling surfaces adjacent to the fire
- D. All of the above

Correct answer: D

66. 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

67. What is placed on the underside of an inflatable liferaft to help prevent it from being skidded by the wind or overturned?

- A. Strikes
- B. A keel
- C. Sea anchor
- D. Ballast bags

Correct answer: D

68. The "Vessel Bridge-to-Bridge Radiotelephone Act" applies to which towboat?

- A. A 90-foot towboat tied to the pier
- B. A 60-foot towboat pushing ahead
- C. A 100 GT towboat, 24 feet in length
- D. A 400 GT towboat anchored

Correct answer: B

69. When a vessel has positive stability, which term is used to describe the distance between the line of force through B and the line of force through G?

- A. Metacentric radius
- B. Righting moment
- C. Metacentric height
- D. Righting arm

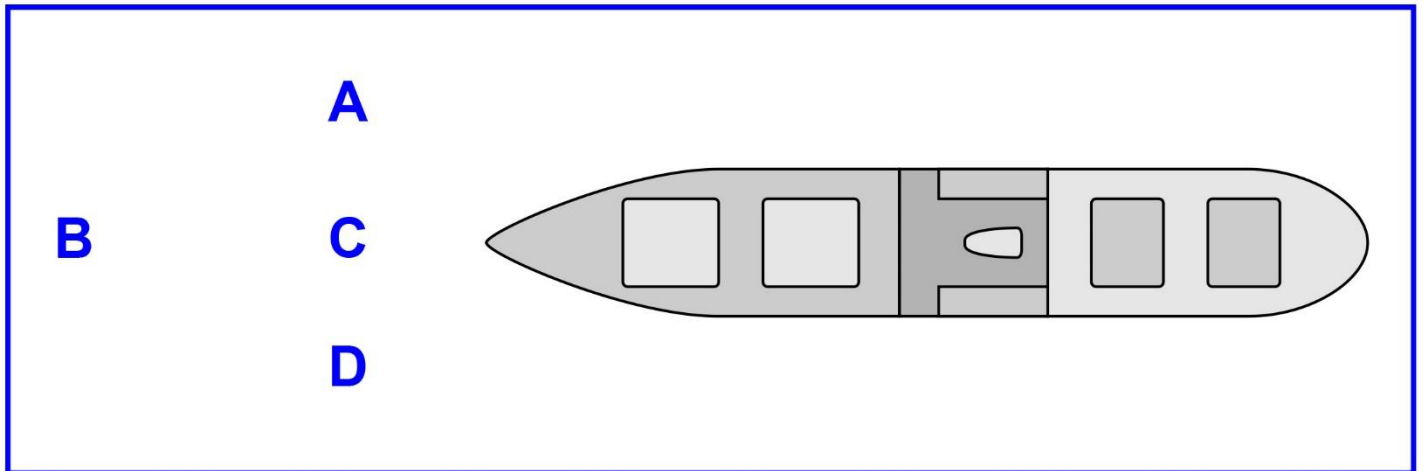
Correct answer: D

70. All of the following are recognized distress signals under the Navigation Rules EXCEPT which signal?

- A. A green star signal
- B. The repeated raising and lowering of outstretched arms
- C. Red flares
- D. Orange-colored smoke

Correct answer: A

D025DG



D032DG

12

11

10

9

8

7

**AFT DRAFT
MARKS**

12

11

10

9

8

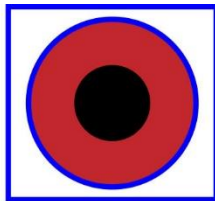
7

**FWD DRAFT
MARKS**

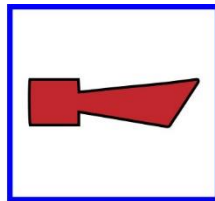
D039SA Part 1 of 2



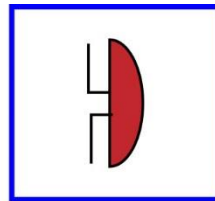
(1)



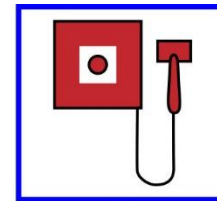
(2)



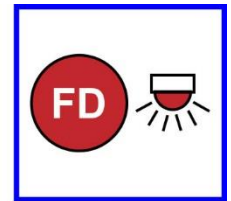
(3)



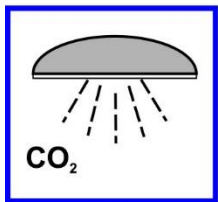
(4)



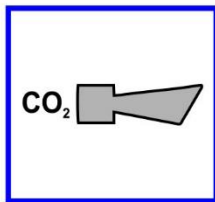
(5)



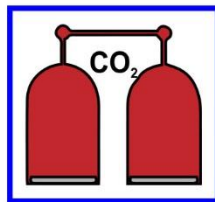
(6)



(7)



(8)



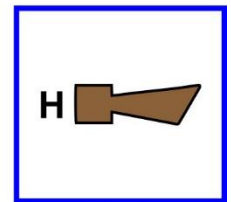
(9)



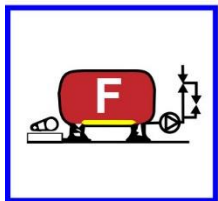
(10)



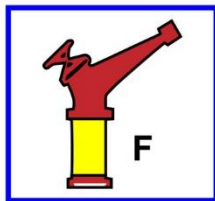
(11)



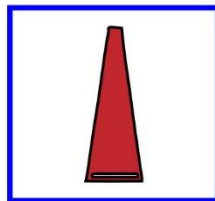
(12)



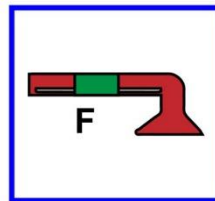
(13)



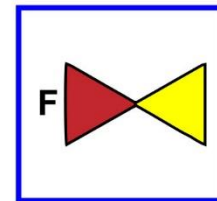
(14)



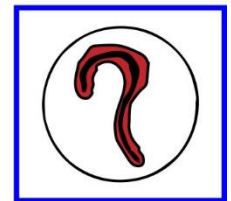
(15)



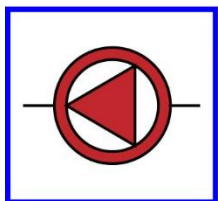
(16)



(17)



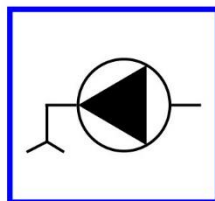
(18)



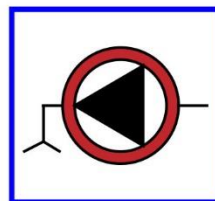
(19)



(20)



(21)



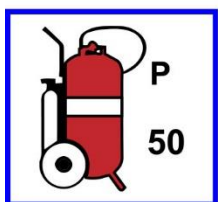
(22)



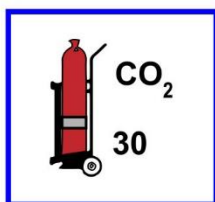
(23)



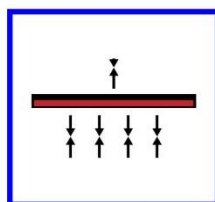
(24)



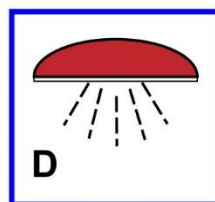
(25)



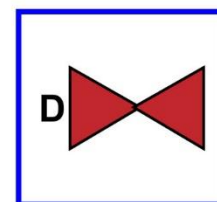
(26)



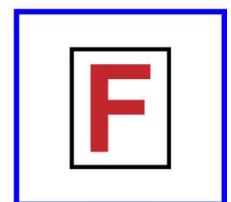
(27)



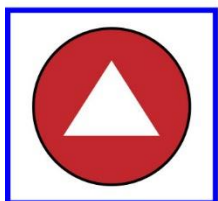
(28)



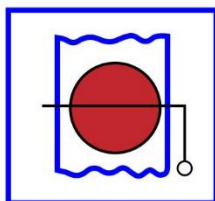
(29)



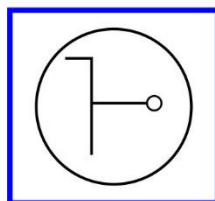
(30)



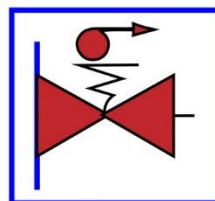
(31)



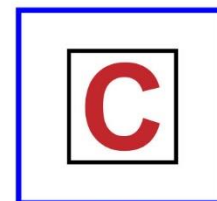
(32)



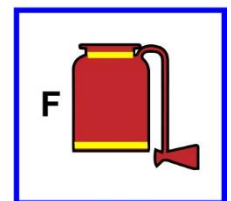
(33)



(34)



(35)



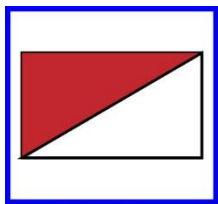
(36)

Adapted for testing purposes only from Graphical Symbols for Shipboard Fire Control Plans

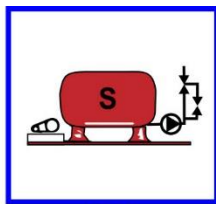
IMO Resolution A.952(23) Adopted 2003

Further reproduction prohibited without permission

D039SA Part 2 of 2



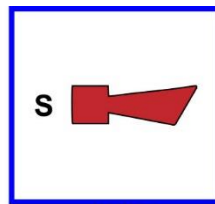
(37)



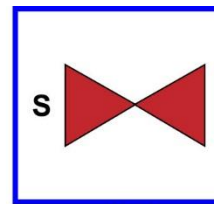
(38)



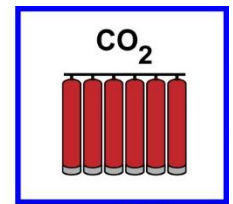
(39)



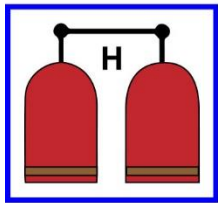
(40)



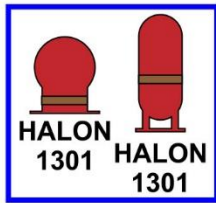
(41)



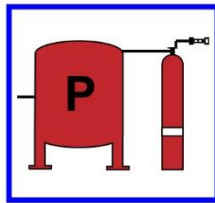
(42)



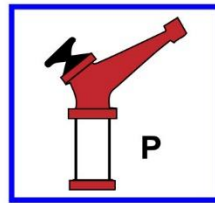
(43)



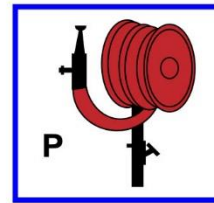
(44)



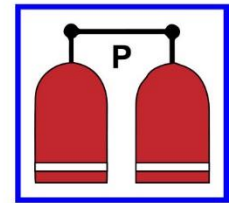
(45)



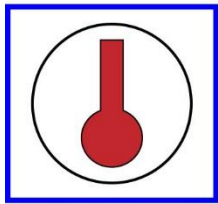
(46)



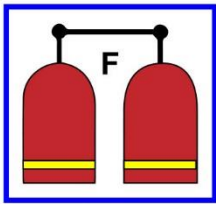
(47)



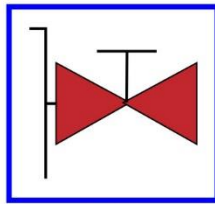
(48)



(49)



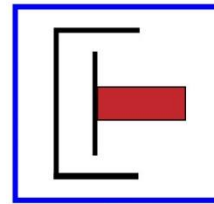
(50)



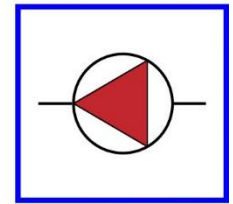
(51)



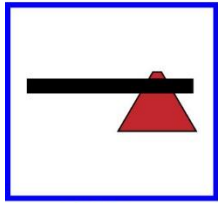
(52)



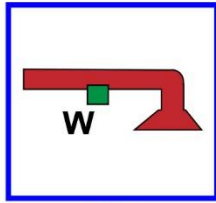
(53)



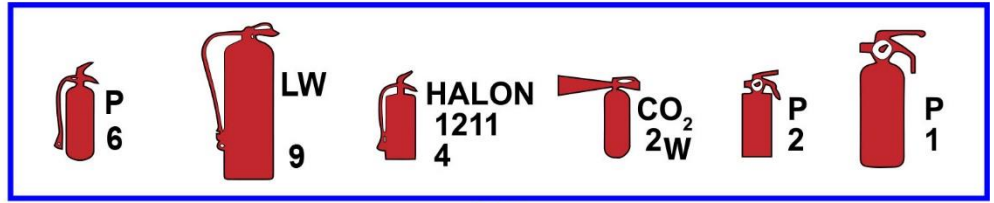
(54)



(55)



(56)



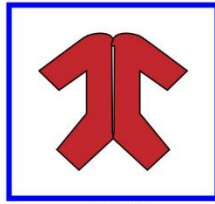
(57)



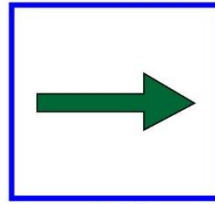
(58)



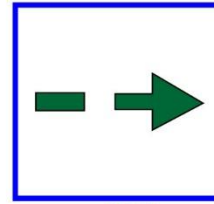
(59)



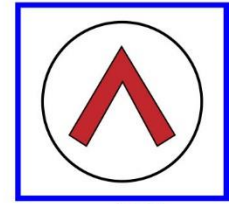
(60)



(61)



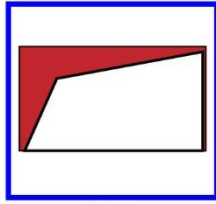
(62)



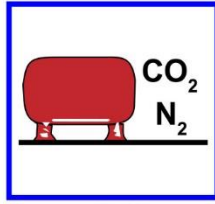
(63)



(64)



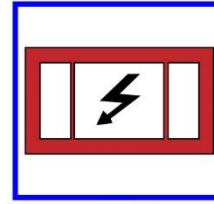
(65)



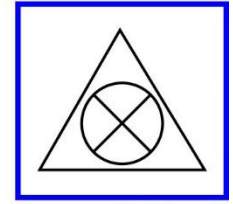
(66)



(67)



(68)



(69)

Adapted for testing purposes only from Graphical Symbols for Shipboard Fire Control Plans
IMO Resolution A.952(23) Adopted 2003
Further reproduction prohibited without permission