

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

Mate Less than 500-1600 Gross Registered Tons Rivers

Q391 Deck General – Safety

(Sample Examination)

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

1. Which agency issues a certificate of loading that is evidence that the rules and regulations concerning bulk grain cargoes have been observed?
- A. Public Health Service
  - B. National Cargo Bureau
  - C. Department of Agriculture
  - D. American Bureau of Shipping

Correct answer: B

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

Correct answer: B

3. The vessel shown in illustration D025DG has broken down and you are going to take her in tow. The wind is coming from her starboard beam. You are making more leeway than she. Where should you position your vessel when you start running lines?
- A. A
  - B. B
  - C. C
  - D. D

Correct answer: A

4. Sweat damage will occur in a non-ventilated cargo hold containing cased machinery when which condition exists?
- A. The dew point of the hold is higher than the temperature of the ship's skin
  - B. The air temperature of the hold is higher than the temperature of the outside air
  - C. The dew point of the outside air is lower than the temperature of the cargo
  - D. The outside air temperature is colder than the temperature of the cargo

Correct answer: A

5. The turning circle of a vessel making a turn over 360 degrees is the path followed by which item?
- A. Centerline
  - B. Center of gravity
  - C. Bridge
  - D. Bow

Correct answer: B

6. 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

7. The two courses of action if the underwater hull is severely damaged are to plug the openings or to take which action?
- A. Ballast to maintain even keel
  - B. Secure power to the compartment
  - C. Dewater the compartment
  - D. Establish and maintain flooding boundaries

Correct answer: D

8. What is a CORRECT reply to a pilot's request, "How's your head"?
- A. "Passing 50°"
  - B. "Checked"
  - C. "Eased to 10° rudder"
  - D. "Steady"

Correct answer: A

9. Which statement about the Williamson turn is FALSE?
- A. It returns the vessel to the original track-line on a reciprocal course.
  - B. It is the slowest of the methods used in turning the vessel.
  - C. It is the best turn to use when the victim is not in sight due to reduced visibility.
  - D. It requires the highest degree of shiphandling skills to accomplish.

Correct answer: D

10. You are fighting a fire in a cargo hold on your vessel. Which action is most important concerning the stability of the vessel?
- A. Shutting off electricity to damaged cables
  - B. Removing burned debris from the cargo hold
  - C. Maneuvering the vessel so the fire is on the lee side
  - D. Draining firefighting water and pumping it overboard

Correct answer: D

11. A vessel operating "in class" has met all the requirements of which group?
- A. U.S. Coast Guard
  - B. Insurance company
  - C. ABS or similar society
  - D. U.S. Customs

Correct answer: C

12. There is a fire in the crew's quarters of your vessel. Which action should you take FIRST?

- A. Ventilate the quarters as much as possible
- B. Attempt to put the fire out yourself before sounding the alarm
- C. Prepare to abandon ship
- D. Close all ventilation to the quarters if possible

Correct answer: D

13. A nylon line is rated at 15,000 lbs. breaking strain. Using a safety factor of 5, what is the safe working load (SWL)?

- A. 3,000 lbs.
- B. 5,000 lbs.
- C. 15,000 lbs.
- D. 65,000 lbs.

Correct answer: A

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

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

Correct answer: A

15. Your vessel is taking on fuel when a small leak develops in the hose. You order the pumping stopped. Before you resume pumping, you should \_\_\_\_\_.

- A. Repair the hose with a patch
- B. Place a large drip pan under the leak and plug the scuppers
- C. Notify the terminal superintendent
- D. Replace the hose

Correct answer: D

16. In continuous operation, what is the effective range of the 15 pound CO2 extinguisher?

- A. 2 to 4 feet
- B. 3 to 8 feet
- C. 9 to 12 feet
- D. 10 to 15 feet

Correct answer: B

17. You are going ahead on twin engines with rudders amidships. Your port engine stalls. To continue your course which action should you take?

- A. Keep your rudder amidships
- B. Apply left rudder
- C. Apply right rudder
- D. Increase engine speed

Correct answer: C

18. Which term describes the rope which is rove through a tail block to be used with a bosun's chair?

- A. Whip
- B. Strop
- C. Gantline
- D. Life line

Correct answer: C

19. Radiation spreads a fire by \_\_\_\_\_.

- A. heated gases flowing through ventilation systems
- B. burning liquids flowing into another space
- C. transmitting the heat of a fire through the ship's metal
- D. transferring heat across an unobstructed space

Correct answer: D

20. When would a U.S. merchant vessel in ocean service NOT be subject to the requirements of Annex V to MARPOL 73/78?

- A. When the vessel is outside of 25 nautical miles from nearest land
- B. When the vessel is outside of the navigable waters of the United States
- C. When the vessel is in the waters of those countries not signatory to MARPOL
- D. A U.S. vessel in ocean service is ALWAYS subject to MARPOL.

Correct answer: D

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

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

Correct answer: C

22. The Master must maintain the Oil Record Book on board for which duration?

- A. 1 month
- B. 12 months
- C. 24 months
- D. 36 months

Correct answer: D

23. Which is the VHF radiotelephone frequency designated to be used only to transmit or receive information pertaining to the safe navigation of a vessel?

- A. 156.65 MHz (channel 13)
- B. 156.6 MHz (channel 12)
- C. 156.7 MHz (channel 14)
- D. 156.8 MHz (channel 16)

Correct answer: A

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

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

Correct answer: A

25. You are having a Coast Guard inspection. Which is TRUE concerning all of the carbon dioxide fire extinguishers aboard?

- A. All of the extinguishers will be discharged and recharged
- B. All of the extinguishers will be weighed
- C. All of the extinguishers will be checked for pressure loss
- D. All of the extinguishers will be sent ashore to a service facility

Correct answer: B

26. What does the helm command "shift the rudder" mean?

- A. Stop the swing of the ship.
- B. Shift the rudder control to the alternate steering method.
- C. Put the rudder over to the opposite side, the same number of degrees it is now.
- D. Put the rudder amidships and hold the heading steady as she goes.

Correct answer: C

27. Which is a mandatory section of the shipboard Oil Pollution Emergency Plan?

- A. Reporting requirements
- B. Removal equipment list
- C. List of individuals required to respond
- D. Planned exercises

Correct answer: A

28. In reference to accidental oil pollution, the most critical time during bunkering is when \_\_\_\_\_.

- A. You first start to receive fuel
- B. Hoses are being disconnected
- C. Final topping off is occurring
- D. Hoses are being blown down

Correct answer: C

29. Who certifies the safe working load of cargo booms on a vessel?

- A. American Bureau of Shipping
- B. The Ship's Master
- C. U.S. Coast Guard
- D. Society of Naval Architects and Marine Engineers

Correct answer: A

30. What effect does bank cushion have on the hull of a vessel in shallow water?

- A. The hull has a greater pressure on the land side of the stern
- B. The hull has a greater pressure on the land side of the bow
- C. The hull has a lesser pressure on the land side of the stern
- D. The hull has a lesser pressure on the land side of the bow

Correct answer: B

31. Before operating a non-oceangoing ship greater than 100 gross tons it must have a fixed piping system to discharge oily mixtures ashore. What other item must this system include?

- A. Approved oil-water separating equipment
- B. At least one outlet accessible from the weather deck
- C. A spare pump in case the main pump is inoperative
- D. A fixed or portable containment system at the shore connection

Correct answer: B

32. Which item is a journal kept by the officer of the watch in which day to day happenings are recorded regarding the deck department?

- A. The bell book
- B. A cargo record book
- C. The deck log
- D. The Official Logbook

Correct answer: C

33. Who must approve the vessel's trim and stability booklet?

- A. Society of Naval Architects and Marine Engineers
- B. United States Coast Guard
- C. International Maritime Organization
- D. National Cargo Bureau

Correct answer: B

34. 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 month
- B. Once a week
- C. Once a year
- D. Twice a year

Correct answer: A

35. Which is the easiest way to dock a right-hand, single-screw vessel?

- A. Starboard side to the wharf
- B. Port side to the wharf
- C. Stern to the wharf
- D. Either side to the wharf

Correct answer: B

36. Fires are grouped into what categories?

- A. Flammable solids, liquids, and gases
- B. Type 1, 2, 3, and 4
- C. Class A, B, C, and D
- D. Combustible solids, liquids, and gases

Correct answer: C

37. No outlet on a fire hydrant may point above the horizontal in order to \_\_\_\_\_.

- A. make connecting easier
- B. avoid personal injury during connection
- C. prevent spray on electrical equipment
- D. avoid kinking the hose

Correct answer: D

38. When water is used to fight a fire on board a ship, the effect of the weight of the water must be taken into account. How much sea water will increase the weight displacement by one ton?

- A. 64 cubic feet
- B. 100 gallons
- C. 35 cubic feet
- D. 500 liters

Correct answer: C

39. During a SAR helicopter evacuation which of the following describes the proper donning of a rescue sling?

- A. The person sits in the sling with their hands clasped across the chest while facing the winch hook
- B. The loop of the sling passes across the chest and under the arms while facing away from the winch hook
- C. The loop of the sling passes behind the back and under the arms while facing the winch hook
- D. The person steps onto the sling grasping the hoist line for support while facing away from the winch hook

Correct answer: C

40. What is the lifesaving signal for "You are seen - Assistance will be given as soon as possible"?

- A. Orange smoke signal
- B. Vertical motion of a flag
- C. Red star rocket
- D. Green star rocket

Correct answer: A



41. You are on a single-screw vessel with a right-handed propeller, and you are making headway. What occurs when you enter shallow water?

- A. Your vessel will have better rudder response
- B. Your vessel will tend to ride higher
- C. Your speed will increase without a change in your throttle
- D. Your rudder response will become sluggish

Correct answer: D

42. Which factor is MOST important in preventing sweat damage within a cargo hold?

- A. Temperature of the cargo
- B. Dew point of the cargo hold
- C. Dew point of the outside atmosphere
- D. Outside air temperature

Correct answer: B

43. You are on a vessel that carries liquefied gasses in bulk. The person on watch is required to have what information about the cargo easily accessible?

- A. Firefighting procedures
- B. Port of loading
- C. Exact quantity on board
- D. Name and address of consignee

Correct answer: A

44. What is the period of validity of a Merchant Mariner Credential?

- A. 5 years
- B. 3 years
- C. 2 years
- D. 1 year

Correct answer: A

45. You see an iceberg that has not been reported. What kind of radio message do you transmit to warn others?

- A. Urgency message
- B. Distress message
- C. Safety message
- D. Routine message

Correct answer: C

46. 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. Have traveling lizards rigged to guide the towline while it is paid-out
- D. Secure the bitter end of the towing hawser to prevent loss if the tow is slipped

Correct answer: B

47. How is the size of wire rope determined?

- A. The number of strands
- B. The diameter
- C. The circumference
- D. The number of wires in each strand

Correct answer: B

48. You are conducting trials to determine the maneuvering characteristics of your vessel. While making a turn, you take ranges and bearings of an isolated light. The results are shown in illustration D034DG below. What is the transfer for a turn of 45°?

- A. 130 yards
- B. 165 yards
- C. 195 yards
- D. 230 yards

Correct answer: A

49. You abandoned ship in the North Atlantic and one of the crew members is hypothermic. During a SAR helicopter extraction which lifting device should be avoided when hoisting this patient to the aircraft?

- A. The rescue sling
- B. The rescue basket
- C. The rescue net
- D. The rescue litter

Correct answer: A

50. A 750 foot passenger vessel operating on the Great Lakes, not subject to SOLAS regulations, is required to carry how many ring life buoys?

- A. 24
- B. 18
- C. 12
- D. 6

Correct answer: A

51. When cleaning up an oil spill in U.S. waters you must obtain the approval of the Federal On-Scene Coordinator before using which of the following?

- A. Sawdust
- B. Skimmers
- C. Chemical agents
- D. Straw

Correct answer: C

52. As a ship moves through the water, it causes a wake, which is also moving forward relative to the sea. In addition to a fore and aft motion, which direction will the wake flow?

- A. Downward and outward flow
- B. Upward and inward flow
- C. Downward and inward flow
- D. Upward and outward flow

Correct answer: B

53. When is it recommended that seawater be used for drinking?

- A. Only at a maximum rate of two ounces per day
- B. If gathered during or immediately after a hard rain
- C. Under no conditions should seawater be drunk
- D. After mixing with an equal quantity of fresh water

Correct answer: C

54. 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. 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. You should only enter a port in the danger zone during hours of darkness

Correct answer: C

55. Prior to handling Class 1 explosive materials, which signal(s) is/are required to be displayed by the vessel?

- A. the Bravo flag and signs posted prohibiting smoking
- B. an announcement on VHF channel 16 every hour
- C. the Bravo flag and a flashing red all-round light
- D. an all-round flashing blue light

Correct answer: A

56. You are on a course of 000°T and put the rudder right 30°. In which direction will the transfer be measured?

- A. 000°T
- B. 090°T
- C. 180°T
- D. 270°T

Correct answer: B

57. Where should the life jackets be stowed?

- A. Locked in watertight containers
- B. In each of the messrooms
- C. Only in the survival crafts
- D. In readily accessible locations

Correct answer: D

58. What speed do most bow thrusters generally become ineffective?

- A. Over 1 knot sternway
- B. At any speed ahead
- C. At any speed astern
- D. Over 3 knots headway

Correct answer: D

59. The galley on your cargo vessel has an area of 2,500 square feet. Which of the following would fulfill the minimum requirements for fire protection?

- A. One A-II extinguisher or post 2017 One 2-A extinguisher
- B. One B-II extinguisher or post 2017 One 40-B:C extinguisher
- C. One B-II and One C-II extinguisher or post 2017 One 40-B and One 40-C extinguisher
- D. One B-V extinguisher or post 2017 One 160-B extinguisher

Correct answer: B

60. When supplemented by a comparable signal on the general alarm, what is the signal for boat stations or boat drill?

- A. A continuous blast of the whistle for a period of not less than 10 seconds
- B. Three short blasts of the whistle
- C. More than six short blasts followed by one long blast of the whistle
- D. One long blast followed by three short blasts of the whistle

Correct answer: C

61. You are the officer on watch and have taken the final drafts of your vessel prior to getting underway. The vessel takes departure and proceeds outbound in a narrow channel. As the vessel increases speed and gains momentum, what will be the effect on the mean draft?

- A. It will decrease in comparison to the sailing drafts
- B. It will increase in comparison to the sailing drafts
- C. It will increase if you decrease speed
- D. It will remain the same as the sailing drafts

Correct answer: B

62. Which is a negotiable document?

- A. Bill of Lading
- B. Receiving Report
- C. Export Declaration
- D. Cargo Manifest

Correct answer: A

63. When using a handheld smoke signal aboard a survival craft, how should you activate the signal?

- A. At the stern of the craft
- B. Inside the craft
- C. On the upwind side of the craft
- D. On the downwind side of the craft

Correct answer: D

64. What does it mean to "shore up" the main deck for the stowage of deck cargo?

- A. Package the cargo in wooden crates so it will not damage the deck
- B. Strengthen the main deck by placing pillars underneath it in the tween decks
- C. Weld pad eyes on deck in proper position to secure the cargo
- D. Distribute the weight of the cargo by placing fore-and-aft planks on the main deck

Correct answer: B

65. Immediately after abandoning a vessel, lookouts should be posted aboard liferafts to look for \_\_\_\_\_.

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

Correct answer: A

66. What is the preferred agent used in fighting a helicopter crash fire?

- A. Foam
- B. Halon
- C. CO2
- D. Water

Correct answer: A

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

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

Correct answer: A

68. How can the accumulation of dangerous fumes generated by the storage batteries be prevented?

- A. By natural or mechanical ventilation
- B. Covering the batteries in a nonconducting, solid enclosure
- C. Mounting the batteries in a position as high as possible
- D. Securing the batteries to vibration reducing mounting brackets

Correct answer: A

69. On an inspected vessel, when may a stability test be dispensed with?

- A. The vessel is of a proven design
- B. Coast Guard has the approved stability test results of a sister vessel
- C. Coast Guard does not have a qualified inspector available
- D. The projected cost is unreasonable

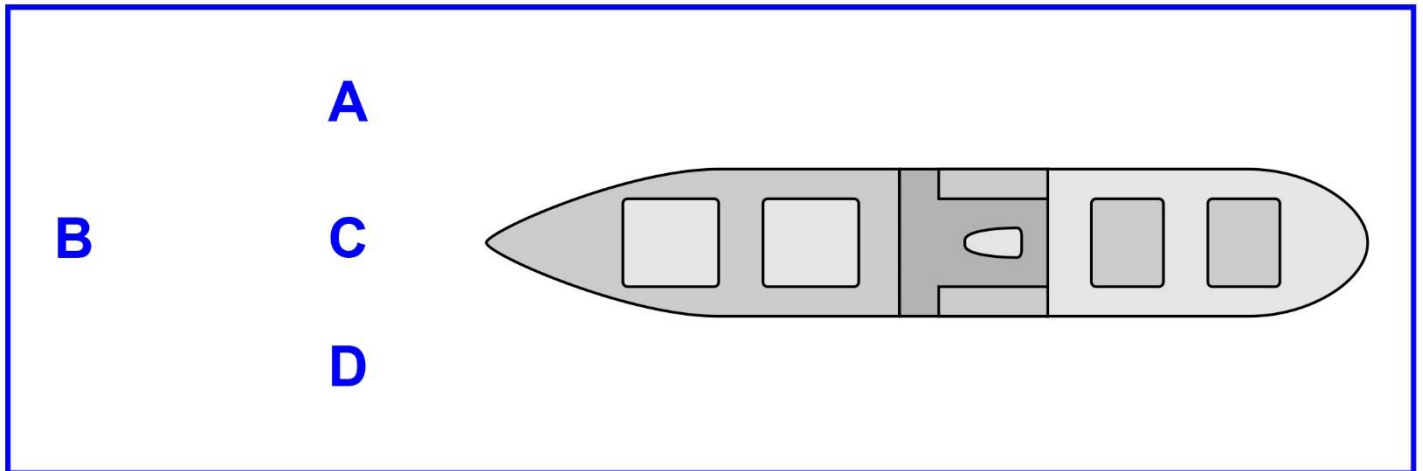
Correct answer: B

70. You have berthed in a port area with other tank vessels. What signal is displayed by a vessel to indicate it is transferring flammable or combustible liquid cargo?

- A. A flashing yellow light at night and a yellow flag during daylight
- B. A red light visible all around the horizon at night and a red flag during daylight
- C. A green light visible all around the horizon at night and a green flag during daylight
- D. An illuminated red and yellow caution flag displayed night and day

Correct answer: B

**D025DG**



## D034DG

HEADING (TRUE)	BEARING (TRUE)	RANGE (YDS)	REMARKS
228°			INITIAL HEADING
228°	232°	2260	ON INITIAL COURSE
228°	234°	1700	RIGHT FULL RUDDER ORDERED
230°	236°	1490	
252°	235°	1275	
275°	231°	1000	
316°	214°	850	
352°	198°	975	
022°	194°	1210	
053°	197°	1430	
087°	202°	1600	
115°	209°	1690	
151°	217°	1700	
183°	225°	1600	
218°	232°	1350	RUDDER AMIDSHIPS
228°	235°	1125	STEADY ON 228°