

U.S.C.G. Merchant Marine Exam
Mate Less than 500-1600 Gross Registered Tons
Q391 Deck General - Safety
(Sample Examination)

Choose the best answer to the following Multiple Choice Questions.

1. Inflatable liferafts shall be serviced at an approved servicing facility every 12 months or not later than the next vessel inspection for certification. However, the total elapsed time between servicing cannot exceed _____.
- (A) 12 months
 - (B) 15 months
 - (C) 17 months
 - (D) 18 months

If choice C is selected set score to 1.

2. On an inspected vessel, which abbreviation refers to the horizontal distance between perpendiculars taken at the forward-most and the after-most points on the waterline at her deepest operating draft?
- (A) LLL
 - (B) LBP
 - (C) LWL
 - (D) LOA

If choice B is selected set score to 1.

3. You are at sea and not in a special area as defined in ANNEX V of MARPOL. How many nautical miles from land must you be to discharge ground garbage that will pass through a one-inch (25 mm) screen into the sea?
- (A) 3 nm
 - (B) 25 nm
 - (C) 6 nm
 - (D) 12 nm

If choice A is selected set score to 1.

4. Which type of rudder may lose its effectiveness at angles of 10 or more degrees?
- (A) Balanced spade
 - (B) Contra-guide
 - (C) Unbalanced
 - (D) Flat plate

If choice A is selected set score to 1.

5. The spread of fire is prevented by _____.
- (A) removing combustibles from the endangered area
 - (B) cooling surfaces adjacent to the fire
 - (C) shutting off the oxygen supply
 - (D) All of the above

If choice D is selected set score to 1.

6. Providing you are not sailing in the Red Sea or another special area as listed in ANNEX V of MARPOL, how many miles from land must you be to throw garbage including bottles, rags, and glass that has not been ground up into the sea?
- (A) 3 nm
 - (B) 6 nm
 - (C) 12 nm
 - (D) 25 nm

If choice C is selected set score to 1.

7. If help has not arrived in 10-12 hours after abandoning a vessel in a rescue boat, you should _____.
- (A) go in one direction until the fuel runs out
 - (B) shut down the engines if installed and put out the sea anchor
 - (C) steer a course for the nearest land
 - (D) steer a course for the nearest sea lane

If choice B is selected set score to 1.

8. Free communication will adversely affect transverse stability only when the flooded space is _____.
- (A) completely flooded
 - (B) open to the sea above and below the waterline
 - (C) off-center
 - (D) on the centerline

If choice C is selected set score to 1.

9. To coil a left-hand laid rope, you should coil the line in _____.
- (A) either a clockwise or a counterclockwise direction
 - (B) a counterclockwise direction only
 - (C) an alternating clockwise and counterclockwise direction
 - (D) a clockwise direction only

If choice B is selected set score to 1.

10. 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) once a week
- (C) once a month
- (D) twice a year

If choice C is selected set score to 1.

11. The number of able seamen required on board is stated in the _____.

- (A) Certificate of Inspection
- (B) Classification Certificate
- (C) SOLAS Certificate
- (D) American Bureau of Shipping code

If choice A is selected set score to 1.

12. You are a watchstanding mate and have come to the bridge to relieve the watch. After reviewing the chart and having been briefed by the off-going mate, you are now ready to effect the relief. The watch is officially transferred to you after _____.

- (A) the mate being relieved says, "You have the conn" and you state the ship's course
- (B) you say, "I relieve you" and you state the course per gyro and magnetic compasses
- (C) the mate being relieved tells you the vessel's course and speed and states that you have the watch
- (D) you state the vessel's charted position, present course and port of destination

If choice B is selected set score to 1.

13. A fire in a pile of canvas is classified as class _____.

- (A) A
- (B) B
- (C) C
- (D) D

If choice A is selected set score to 1.

14. Which will most likely occur when entering shallow water?

- (A) The vessel's trim will change.
- (B) An increase in speed will occur.
- (C) The vessel's list will change.
- (D) Rudder action will become more effective.

If choice A is selected set score to 1.

15. Given a dry bulb temperature of 78°F and wet bulb temperature of 66.5°F, the dew point is _____.

- (A) 47.0°F
- (B) 51.5°F
- (C) 59.0°F
- (D) 70.0°F

If choice C is selected set score to 1.

16. Which effect does speed through the water have on a vessel which is underway in shallow water?

- (A) A decrease in the speed results in a decrease in steering response and maneuverability.
- (B) A decrease in speed results in the vessel sucking down on an even plane.
- (C) An increase in speed results in the stern sucking down lower than the bow.
- (D) An increase in speed results in the vessel rising on an even plane.

If choice C is selected set score to 1.

17. You are on a 30,000 DWT tankship engaged in trade to another country signatory to MARPOL 73/78. Which statement is TRUE?

- (A) The Certificate of Inspection is prima facie evidence of compliance with MARPOL 73/78.
- (B) AN IOPP Certificate is renewed at each inspection for certification.
- (C) The IOPP Certificate is valid for 5 years.
- (D) An IOPP Certificate is invalid if the ship carries cargoes outside the classes authorized thereon.

If choice C is selected set score to 1.

18. A Chinese stopper (two lines) will hold best when you _____.

- (A) twist the ends together and hold them at right angles to the mooring line
- (B) twist the ends together and hold them in the direction opposite to the pull
- (C) fasten the bitter ends to the mooring line with half hitches
- (D) twist the ends together and hold them in the direction of the pull

If choice D is selected set score to 1.

19. The standing part of a tackle is _____.

- (A) the hook that engages the weight to be moved
- (B) that part to which power is applied
- (C) all the fall except the hauling part
- (D) that part of the falls made fast to one of the blocks

If choice D is selected set score to 1.

20. In order to reduce your wake in a narrow channel you should _____.

- (A) apply enough rudder to counter the effect of the current
- (B) reduce your speed
- (C) shift the weight to the stern
- (D) change your course to a zigzag course

If choice B is selected set score to 1.

21. Recharging a previously used cartridge-operated dry-chemical extinguisher is accomplished by _____.

- (A) recharging the cartridge and refilling it with powder
- (B) authorized fire equipment servicing personnel only
- (C) replacing the propellant cartridge and refilling with powder
- (D) puncturing the cartridge seal after installation

If choice C is selected set score to 1.

22. According to U.S. regulations, which of the following describes the declaration of inspection?

- (A) paper issued by the Coast Guard marine inspector which allows you to conduct a transfer operation
- (B) application you must complete and submit to the Coast Guard to have an inspector visit your vessel
- (C) document signed by vessel and shore facility persons-in-charge declaring that all transfer requirements have been met
- (D) annual report submitted by vessel personnel to the Coast Guard declaring that all transfer equipment has been inspected

If choice C is selected set score to 1.

23. You have the "conn" at the time the helmsman who is steering by hand reports that the rudder is not responding to the wheel. Your FIRST action should be to _____.

- (A) signal the engine room to stop the engines
- (B) call the engine room
- (C) call the Master
- (D) shift the selector switch to the other steering pump

If choice D is selected set score to 1.

24. Under normal operating conditions aboard a ship, who has the overall responsibility in maintaining the Oil Record Book?

- (A) Chief Engineer
- (B) Master
- (C) First Assistant Engineer
- (D) Chief Mate

If choice B is selected set score to 1.

25. When piloting a vessel, how are visual references used to establish a constant rate of turn?

- (A) Visual references cannot be used to maintain a constant rate of turn.
- (B) Begin the turn when the fixed object is on the beam.
- (C) Fixed objects that stay on the same relative bearing when the ship is turning indicate a constant rate of turn.
- (D) Keep the fixed object's relative bearing opening, for a constant rate of turn.

If choice C is selected set score to 1.

26. The distance that a vessel travels from the time that the order to put engines full astern until the vessel is dead in the water is known as _____.

- (A) head reach
- (B) advance
- (C) surge
- (D) transfer

If choice A is selected set score to 1.

27. Leeway is the _____.

- (A) difference between the true course and the compass course
- (B) lateral movement of a vessel downwind of her intended course
- (C) displacement of a vessel multiplied by her speed
- (D) momentum of a vessel after her engines have been stopped

If choice B is selected set score to 1.

28. As a rule, ships of most configurations, when drifting in calm water with negligible current, will lie _____.

- (A) stern to the wind
- (B) beam to the wind
- (C) with the wind on the quarter
- (D) bow to the wind

If choice B is selected set score to 1.

29. Which statement about tunnel bow thrusters fitted to large vessels is TRUE?

- (A) When going astern at slow speed, they provide effective steering control.
- (B) Because of their location, most modern installations have as much power as a tug.
- (C) They are fully effective at all drafts.
- (D) They are effective on most vessels at speeds up to 10 knots.

If choice A is selected set score to 1.

30. The force exerted by a propeller which tends to throw the stern right or left is called _____.

- (A) rotational force
- (B) sidewise force
- (C) thrust
- (D) slip

If choice B is selected set score to 1.

31. In weighing CO₂ cylinders, they must be recharged if weight loss exceeds _____.

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

If choice B is selected set score to 1.

32. (3.2.7-10) What is the MOST important consideration when determining how to fight an electrical fire?

- (A) Whether the fire is in machinery or passenger spaces
- (B) Maintaining electrical power
- (C) The amount of toxic fumes created by the extinguisher
- (D) Danger of shock to personnel

If choice D is selected set score to 1.

33. Ventilation systems connected to a compartment in which a fire is burning are normally closed to prevent the rapid spread of the fire by _____.

- (A) spontaneous combustion
- (B) conduction
- (C) radiation
- (D) convection

If choice D is selected set score to 1.

34. Carbon dioxide as a fire fighting agent has which advantage over other agents?

- (A) It is cheaper.
- (B) It is safer for personnel.
- (C) It is most effective on a per unit basis.
- (D) It causes minimal damage.

If choice D is selected set score to 1.

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) If on a coastwise voyage along the east coast of the U.S., you should put into the nearest port.
- (B) You should only enter a port in the danger zone during hours of darkness.
- (C) You should attempt to submit an AMVER report to NSA.
- (D) When over 200 hundred miles from a port in the danger zone, you should not darken ship.

If choice C is selected set score to 1.

36. Fire in an engine compartment is best extinguished with carbon dioxide gas (CO₂) and by _____.

- (A) closing the compartment except for the ventilators
- (B) leaving the compartment open to the air
- (C) increasing the air flow to the compartment by blowers
- (D) completely closing the compartment

If choice D is selected set score to 1.

37. You have abandoned ship and are in charge of a liferaft. How much water per day should you permit each occupant to drink after the first 24 hours?

- (A) 1 pint
- (B) 1 can
- (C) 1 quart
- (D) 1 gallon

If choice A is selected set score to 1.

38. When approaching a fire from leeward you should shield fire fighters from the fire by using _____.

- (A) low-velocity fog
- (B) foam spray
- (C) a straight stream of water
- (D) high-velocity fog

If choice D is selected set score to 1.

39. A person has fallen overboard and is being picked up with a lifeboat. If the person appears in danger of drowning, the lifeboat should make _____.

- (A) an approach across the wind
- (B) an approach from windward
- (C) the most direct approach
- (D) an approach from leeward

If choice C is selected set score to 1.

40. When a man who is conscious has fallen overboard is being picked up by a lifeboat, the boat should approach with the wind _____.

- (A) ahead and the victim just off the bow
- (B) just off the bow and the victim to leeward
- (C) just off the bow and the victim to windward
- (D) astern and the victim just off the bow

If choice B is selected set score to 1.

41. While you are on watch, you learn that a crewman has not been seen on board for the past three hours. Which type of turn is best in this man-overboard situation?

- (A) Scharnow
- (B) Racetrack
- (C) Round
- (D) Single turn of 180°

If choice A is selected set score to 1.

42. You are on watch and see a man fall overboard. Which man overboard turn should NOT be used in this situation?

- (A) Racetrack
- (B) Scharnow
- (C) Single turn
- (D) Williamson

If choice B is selected set score to 1.

43. A situation has occurred in which your vessel must be towed. When the towing vessel passes the towing line to you, you should secure the line _____.

- (A) to the forward part of the deckhouse
- (B) to the forward-most bitts
- (C) to the base of the foremast
- (D) at the stern

If choice B is selected set score to 1.

44. 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, you must _____.

- (A) compare the rate of drift between the ships
- (B) install chafing gear on the towline
- (C) secure the bitter end of the towing hawser to prevent loss if the tow is slipped
- (D) have traveling lizards rigged to guide the towline while it is paid-out

If choice A is selected set score to 1.

45. Fuel for use on a vessel (300 GT or more constructed before July 1, 1974) may be carried in independent tanks forward of a collision bulkhead if the _____.

- (A) tanks were designated, installed, or constructed for fuel oil carrying before July 1, 1974
- (B) shell of the tank is of the same thickness or greater than that of the vessel's hull
- (C) fuel has a flash point above 180°F
- (D) tank is 18 inches inboard of the hull structure

If choice A is selected set score to 1.

46. How many months after its expiration date may a Coast Guard credential be renewed without retaking the complete exam?

- (A) 1 month
- (B) 6 months
- (C) 12 months
- (D) 24 months

If choice C is selected set score to 1.

47. A journal kept by the officer of the watch in which day to day happenings are recorded regarding the deck department is the _____.

- (A) bell book
- (B) deck rough log
- (C) cargo record book
- (D) Official Logbook

If choice B is selected set score to 1.

48. You are the first vessel to arrive at the scene of a distress. Due to the volume of traffic on the radio, you are unable to communicate with the vessel in distress. Which action should you take?

- (A) Broadcast "Charlie Quebec-Mayday-Quiet".
- (B) Switch to flag hoists.
- (C) Key the microphone three times in quick succession.
- (D) Broadcast "Seelonce Distress".

If choice D is selected set score to 1.

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

- (A) Routine message
- (B) Safety message
- (C) Distress message
- (D) Urgency message

If choice B is selected set score to 1.

50. The color of rockets, shells, or rocket parachute flares used to indicate that the vessel is in distress and requires immediate assistance is _____.

- (A) white
- (B) green
- (C) yellow
- (D) red

If choice D is selected set score to 1.

51. The greatest effect on stability occurs from loose liquids flowing _____.

- (A) from fore to aft in the tanks of a vessel
- (B) from side to side in the tanks of the vessel
- (C) in and out of a vessel that is holed in a wing tank
- (D) in and out of a vessel that is holed in a peak tank

If choice C is selected set score to 1.

52. Progressive flooding is controlled by securing watertight boundaries and _____.

- (A) transferring water ballast
- (B) abandoning ship
- (C) pumping out flooded compartments
- (D) jettisoning cargo

If choice C is selected set score to 1.

53. The brickwork surrounding the firebox of a boiler is known as _____.

- (A) the water wall
- (B) refractory
- (C) the screen wall
- (D) fire plate

If choice B is selected set score to 1.

54. When fruit is carried as refrigerated cargo, the most frequent cause of its being infected at the discharge port is _____.

- (A) carriage at the wrong temperature
- (B) improper cleaning of the cargo spaces
- (C) improper pre-cooling of the cargo spaces
- (D) leaks in the ship's refrigeration system

If choice B is selected set score to 1.

55. The certificate of loading required by each vessel carrying grain in bulk is issued by the _____.

- (A) National Cargo Bureau
- (B) American Bureau of Shipping
- (C) owner or charterer of the vessel
- (D) shipper of the cargo

If choice A is selected set score to 1.

56. The wire rope used for cargo handling on board your vessel has a safe working load of eight tons. It shall be able to withstand a breaking test load of _____.

- (A) 32 tons
- (B) 40 tons
- (C) 48 tons
- (D) 64 tons

If choice B is selected set score to 1

57. Camphor oil is classified as a _____.

- (A) Grade A flammable liquid
- (B) Grade C flammable liquid
- (C) Grade D combustible liquid
- (D) Grade E combustible liquid

If choice C is selected set score to 1.

58. Which product(s) is(are) compatible with the product ethylene cyanohydrin?

- (A) Sulfuric acid
- (B) Nitric acid
- (C) Ammonia
- (D) Isocyanates

If choice C is selected set score to 1.

59. 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 red light visible all around the horizon
- (B) An illuminated red and yellow caution flag
- (C) A green light visible all around the horizon
- (D) A flashing yellow light

If choice A is selected set score to 1.

60. A precaution you should take before bunkering is to _____.

- (A) plug the sounding pipes
- (B) plug the scuppers
- (C) close the lids on the vents
- (D) plug the vents

If choice B is selected set score to 1.

61. What is the minimum number of fire pumps required on a cargo vessel of 2,000 GT?

- (A) 1
- (B) 2
- (C) 3
- (D) 4

If choice B is selected set score to 1.

62. 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 powder forms a solid coating over the surface.
- (C) The dry chemical powder attacks the fuel and oxygen chain reaction.
- (D) The dry chemical smothers the fire.

If choice C is selected set score to 1.

63. Which statement is TRUE concerning carbon dioxide?

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

If choice D is selected set score to 1.

64. In continuous operation, the effective range of the 15 pound CO₂ extinguisher is limited to _____.

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

If choice B is selected set score to 1.

65. The trim and stability booklet must be approved by the _____.

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

If choice D is selected set score to 1.

66. 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) Sea anchor
- (C) A keel
- (D) Ballast bags

If choice D is selected set score to 1.

67. Number 3 lifeboat would be _____.

- (A) the forward boat on the starboard side
- (B) behind boat number 2 on the port side
- (C) behind boat number 1 on the starboard side
- (D) behind boat number 1 on the port side

If choice C is selected set score to 1.

68. To disengage a survival craft suspended from the cable above the water, you must pull the safety pin and _____.

- (A) pull the hook release handle and use the ratchet bar
- (B) pull the hook release handle
- (C) use the ratchet bar and depress the retainer
- (D) pull the hook release handle and depress the retainer

If choice A is selected set score to 1.

69. What size bilge pump is required for a lifeboat which has a capacity of 675 cubic feet?

- (A) 1
- (B) 2
- (C) 3
- (D) 4

If choice B is selected set score to 1.

70. The breaking strength of the service lines of the rockets used with an impulse-projected, rocket type line throwing appliances is _____.

- (A) 300 lbs
- (B) 500 lbs
- (C) 1000 lbs
- (D) 1500 lbs

If choice B is selected set score to 1.