

U.S.C.G. Merchant Marine Exam

Apprentice Mate Steersman

Q419 Deck Safety

(Sample Examination)

Choose the best answer to the following Multiple Choice Questions.

1. The forward draft of your ship is 27'-11" and the after draft is 29'-03". The draft amidships is 28'-05". Your vessel is _____.

- (A) listed
- (B) hogged
- (C) sagged
- (D) trimmed by the head

If choice B is selected set score to 1.

2. 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.

3. 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.

4. 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.

5. Normally Before taking drinking water on board in the U.S. or its possessions, the responsible person from the vessel should determine that the source _____.
- (A) is used by a city
 - (B) is approved by the Public Health Service
 - (C) is not from surface water
 - (D) has been treated with chlorine

If choice B is selected set score to 1.

6. 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.

7. 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.

8. What is the purpose of a striker plate?
- (A) Absorbs machinery vibration
 - (B) Provides surface for applying force on machinery
 - (C) Prevents valve stem over-travel
 - (D) Provides landing surface for the sounding bob

If choice D is selected set score to 1.

9. The lights on the outside of the canopy on an inflatable liferaft operate _____.
- (A) by turning the globe clockwise
 - (B) by a switch at each light
 - (C) automatically when the raft is inflated
 - (D) by a light sensor

If choice C is selected set score to 1.

10. Normally It is desirable to have screens on the vents of potable water tanks to _____.

- (A) prevent backups
- (B) prevent explosions
- (C) filter the incoming air
- (D) stop insects from entering

If choice D is selected set score to 1.

11. The outlet at a fire hydrant may be positioned anywhere from horizontal to pointing _____.

- (A) vertically upward
- (B) 45° upward
- (C) vertically downward
- (D) all of the above

If choice C is selected set score to 1.

12. To launch a liferaft by hand, you should _____.

- (A) throw the liferaft over the side and pull the operating cord
- (B) cut the casing bands, throw the raft over the side and it will inflate by itself
- (C) cut the casing bands, throw the raft over the side and pull the operating cord
- (D) detach the operating cord, throw the liferaft over the side and it will then inflate

If choice A is selected set score to 1.

13. If you are forced to abandon ship in a rescue boat, you should _____.

- (A) head for the nearest land
- (B) head for the closest sea-lanes
- (C) remain in the immediate vicinity
- (D) vote on what to do, so all hands will have a part in the decision

If choice C is selected set score to 1.

14. Which is TRUE concerning immersion suits and their use?

- (A) Only a light layer of clothing may be worn underneath.
- (B) They should be tight fitting.
- (C) A puncture in the suit will not appreciably reduce its value.
- (D) They provide sufficient flotation to do away with the necessity of wearing a life jacket.

If choice D is selected set score to 1.

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

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

If choice C is selected set score to 1.

16. What precaution should be taken when testing a line throwing gun?

- (A) Fire it at an angle of approximately 90 degrees to the horizon.
- (B) Never remove the line from the rocket.
- (C) Wear asbestos gloves.
- (D) All of the above

If choice B is selected set score to 1.

17. A self-contained breathing apparatus is used to _____.

- (A) enter areas that may contain dangerous fumes or lack oxygen
- (B) determine if the air in a tank is safe for men
- (C) make underwater repairs to barges
- (D) resuscitate an unconscious person

If choice A is selected set score to 1.

18. Hand holds or straps on the underside of an inflatable liferaft are provided _____.

- (A) to hang the raft for drying
- (B) to carry the raft around on deck
- (C) for crewmen to hang on to
- (D) to right the raft if it capsizes

If choice D is selected set score to 1.

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

- (A) 1
- (B) 12
- (C) 14
- (D) 18

If choice D is selected set score to 1.

- 20.** 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.

- 21.** 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.

- 22.** You have carbon tetrachloride as part of the cargo. If a fire breaks out in the general area, what is the major danger from the carbon tetrachloride?

- (A) Phosgene gas may be formed if it comes in contact with hot metal.
- (B) You cannot use water to fight the fire because it will react with the carbon tetrachloride.
- (C) It will explode if exposed to a flame.
- (D) It will burn rapidly once ignited.

If choice A is selected set score to 1.

- 23.** 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.

24. You are fighting a class "B" fire with a portable dry chemical extinguisher. The discharge should be directed _____.

- (A) to bank off a bulkhead onto the fire
- (B) over the top of the fire
- (C) at the seat of the fire, starting at the near edge
- (D) at the main body of the fire

If choice C is selected set score to 1.

25. An inflatable liferaft can be launched by _____.

- (A) the float-free method ONLY
- (B) throwing the entire container overboard and then pulling on the operating cord to inflate the raft
- (C) breaking the weak link on the painter
- (D) removing the securing straps

If choice B is selected set score to 1.

26. The external inflation bladder on an immersion suit should be inflated _____.

- (A) after one hour in the water
- (B) after you enter the water
- (C) after you notice that your suit is losing buoyancy
- (D) before you enter the water

If choice B is selected set score to 1.

27. Life jackets should be marked with the _____.

- (A) stowage space assigned
- (B) vessel's name
- (C) maximum weight allowed
- (D) vessel's home port

If choice B is selected set score to 1.

28. What is the penalty for failure to enforce, or comply with, the vessel bridge-to-bridge radiotelephone regulations?

- (A) \$5,000 fine and imprisonment for not more than one year, or both
- (B) Civil penalty of no more than \$5,000
- (C) Civil penalty of no more than \$650
- (D) \$1,000 fine or imprisonment for not more than two years

If choice C is selected set score to 1.

29. 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.

30. By day, what is the signal meaning, "This is the best place to land"?

- (A) white smoke signal
- (B) vertical motion of a red flag
- (C) white star rocket
- (D) vertical motion of a white flag or the arms

If choice D is selected set score to 1.

31. 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.

32. 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.

33. 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.

34. A situation has occurred where it becomes necessary for you to be towed. What action should be taken to prevent your vessel from yawing?

- (A) Shift weight to the bow
- (B) Throw excess weight overboard
- (C) Shift weight to the stern
- (D) Shift weight to the center of the boat

If choice C is selected set score to 1.

35. 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.

36. 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.

37. 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.

38. 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.

- 39.** A large fire, involving class "A" material, has developed in the ship's galley. In combating this fire, you should _____.
- (A) have a hose team cool the galley door, then open the door and extinguish the fire using a type B-II extinguisher
 - (B) cool adjoining horizontal and vertical surfaces before opening the galley door
 - (C) keep the galley door closed until all the class "A" material has been consumed by the fire
 - (D) advance the hose team into the galley without any preparatory action

If choice B is selected set score to 1.

- 40.** 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.

- 41.** 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.

- 42.** In illustration D031DG below, what does the single line located directly above the diamond indicate?
- (A) freeboard line
 - (B) water line
 - (C) load line
 - (D) deck line

If choice D is selected set score to 1.

43. 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.

44. It is necessary to secure the forced ventilation to a compartment where there is a fire to _____.

- (A) extinguish the fire by carbon monoxide smothering
- (B) prevent additional oxygen from reaching the fire
- (C) allow the exhaust fans to remove smoke
- (D) protect fire fighting personnel from smoke

If choice B is selected set score to 1.

45. 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.

46. A fire hose with a nozzle attached must be connected to each hydrant except when exposed to heavy weather or when the _____.

- (A) fire hose might be damaged by cargo operations
- (B) vessel is in port
- (C) fire pumps are used for purposes other than supplying water to the fire main
- (D) fire-main system is not charged

If choice A is selected set score to 1.

47. 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.

48. 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

If choice C is selected set score to 1.

49. 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.

50. 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.

51. If passengers are on board when an abandon ship drill is carried out, they should _____.

- (A) take part
- (B) stay out of the way and do what they want
- (C) watch
- (D) go to their quarters

If choice A is selected set score to 1.

52. 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.

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

- (A) Specific heat
- (B) Viscosity
- (C) Volatility
- (D) Flash point

If choice C is selected set score to 1.

54. 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.

55. What does a pyrometer measure on a diesel engine?

- (A) Exhaust temperature
- (B) Air box pressure
- (C) Water pressure
- (D) Water temperature

If choice A is selected set score to 1.

56. The term that indicates how many tons of cargo a vessel can carry is _____.

- (A) bale cubic
- (B) deadweight
- (C) loaded displacement
- (D) gross tonnage

If choice B is selected set score to 1.

57. The distance between the waterline of a vessel and the main deck is called _____.

- (A) freeboard
- (B) camber
- (C) buoyancy
- (D) draft

If choice A is selected set score to 1.

58. Sometimes it is desirable to connect a member both by riveting and welding. Which statement is TRUE concerning this procedure?

- (A) The welding must be completed before the riveting commences.
- (B) Tearing through the member is more likely in this type connection.
- (C) The weld increases the tensile stress on the rivet heads.
- (D) The weld may be broken by the stresses caused by riveting.

If choice A is selected set score to 1.

59. In a water-tube marine type boiler, after the steam leaves the generating tubes, in what part of the boiler is temperature of the steam increased?

- (A) Superheater
- (B) Economizer
- (C) Mud drum
- (D) Firebox

If choice A is selected set score to 1.

60. Diesel engines obtain combustion air through turbo chargers, blowers, or _____.

- (A) carburetors
- (B) air receivers
- (C) natural aspiration
- (D) air starters

If choice C is selected set score to 1.

61. The quickest method to stop a small diesel engine whose throttle or governor has become stuck open is to _____.

- (A) drain the fuel tank
- (B) turn off the ignition switch
- (C) apply the shaft brake
- (D) close the fuel supply valve

If choice D is selected set score to 1.

62. All diesel engines are classified as _____.

- (A) vacuum ignition
- (B) external combustion
- (C) four cycle
- (D) compression ignition

If choice D is selected set score to 1.

63. 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.

64. 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.

65. A tank 36 ft. by 36 ft. by 6 ft. is filled with water to a depth of 5 ft. If a bulkhead is placed in the center of the tank running fore-and-aft along the 36-foot axis, how will the value of the moment of inertia of the free surface be affected?

- (A) The moment of inertia would be 1/2 the original value.
- (B) The moment of inertia would remain unchanged.
- (C) The moment of inertia would be 1/4 its original value.
- (D) None of the above

If choice C is selected set score to 1.

66. The correction to KG for transverse free surface effects may be found by dividing the vessel's displacement into the _____.

- (A) sum of the transverse free surface moments of the vessel
- (B) sum of the vertical moments of the vessel
- (C) transverse baseline of the vessel
- (D) transverse free surface correction for the vessel

If choice A is selected set score to 1.

67. A negative metacentric height _____.

- (A) will always cause a vessel to capsize
- (B) should always be immediately corrected
- (C) always results from off-center weights
- (D) All of the above are correct

If choice B is selected set score to 1.

68. The enclosed area defined as the intersection of the surface of the water and the hull of a vessel is the _____.

- (A) amidships plane
- (B) longitudinal reference plane
- (C) waterplane
- (D) baseline

If choice C is selected set score to 1.

69. What is NOT a motion of the vessel?

- (A) Pitch
- (B) Yaw
- (C) Roll
- (D) Trim

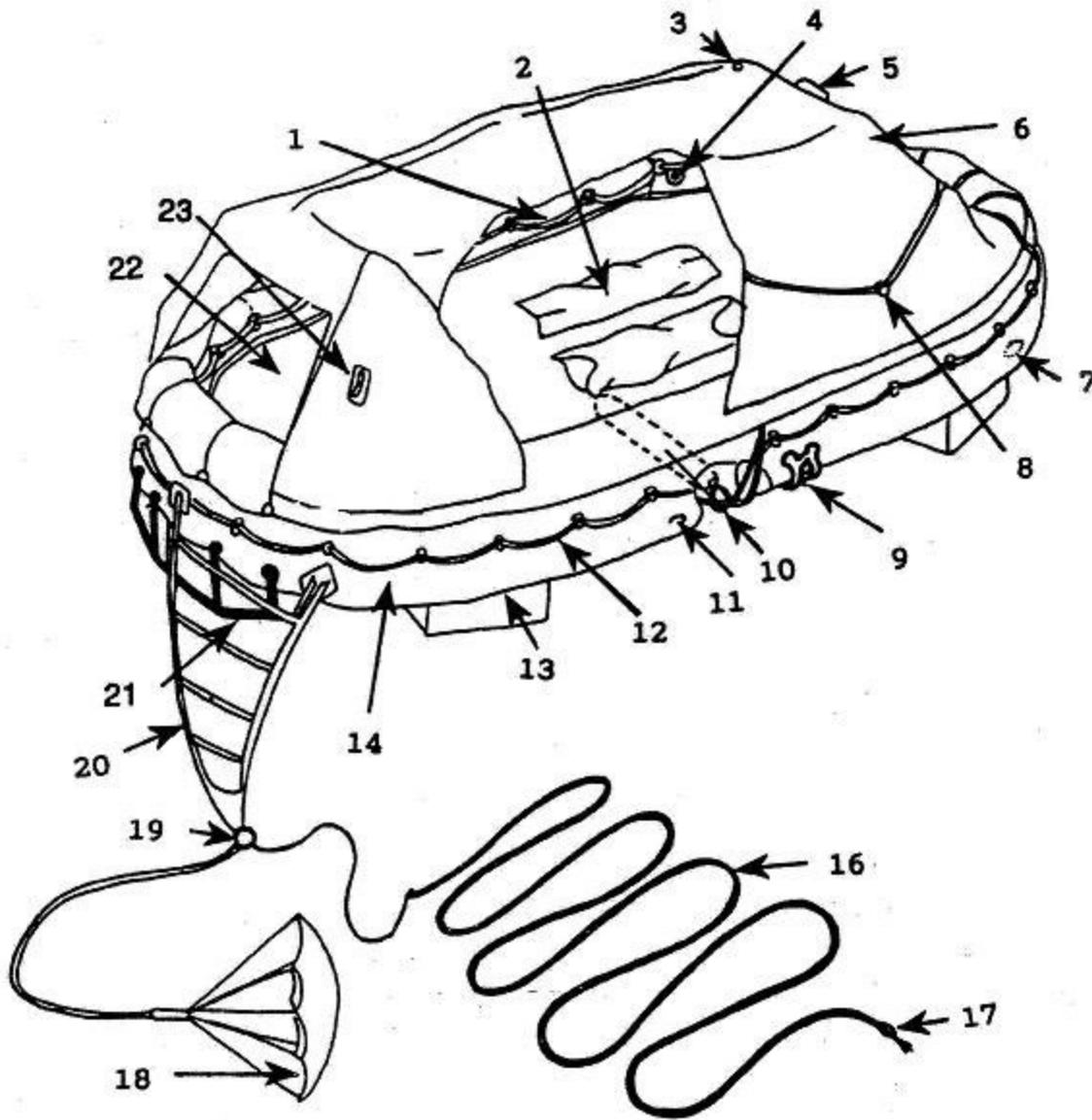
If choice D is selected set score to 1.

70. The horizontal port or starboard movement of a vessel is called _____.

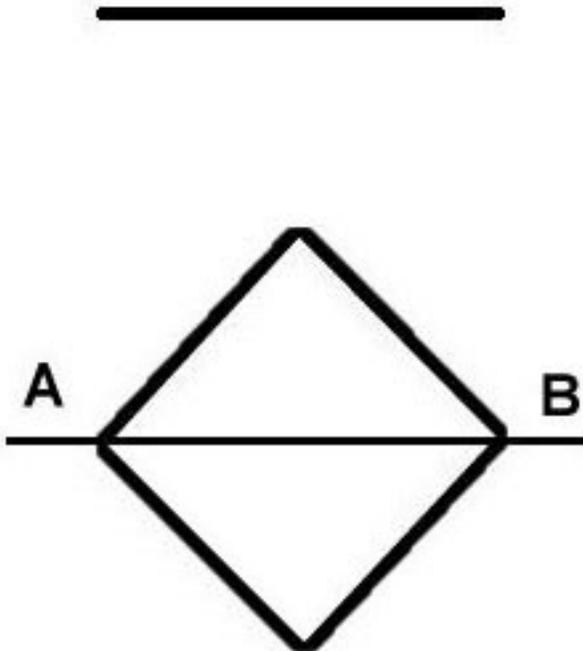
- (A) heave
- (B) surge
- (C) yaw
- (D) sway

If choice D is selected set score to 1.

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