

U.S.C.G. Merchant Marine Exam

Master Less than 100 GRT to
Master or Mate Less than 200 GRT Rivers

Q400 Navigation and Deck General - Safety

(Sample Examination)

Choose the best answer to the following Multiple Choice Questions.

1. A flame screen _____.
- (A) prevents the passage of flammable vapors
 - (B) permits the passage of vapor but not of flame
 - (C) prevents inert gas from leaving a tank
 - (D) permits vapors to exit but not enter a tank

If choice B is selected set score to 1.

2. Where is the heel block located on a boom?

- (A) Near the midships guy
- (B) At the base of the boom
- (C) At the cargo hook
- (D) Near the spider band

If choice B is selected set score to 1.

3. In accordance with U.S. regulations, no vessel can come or remain alongside a tank vessel while it is loading A, B, or C grade cargo without permission from whom?

- (A) The USCG captain of the port
- (B) The tank ship owner
- (C) The person in charge of the vessel which is loading
- (D) The terminal manager

If choice C is selected set score to 1.

4. The two courses of action if the underwater hull is severely damaged are to plug the openings or to take which action?

- (A) Dewater the compartment
- (B) Ballast to maintain even keel
- (C) Establish and maintain flooding boundaries
- (D) Secure power to the compartment

If choice C is selected set score to 1.

5. How is the number of pounds of carbon dioxide required for each cargo space on a cargo vessel computed?

- (A) One pound of CO₂ per cubic foot of cargo space
- (B) The gross volume of the space in cubic feet divided by 30
- (C) One pound of CO₂ per square foot of deck area
- (D) The gross volume of the space in cubic feet divided by 100

If choice B is selected set score to 1.

- 6.** When lowering manropes alongside a stage rigged over the side of a vessel, they should be allowed to trail in the water to serve which purpose?
- (A) To easily remove the kinks that form in the lines
 - (B) It allows the seamen on the stage to know the direction and strength of the current
 - (C) To provide the seaman something to hold onto if he or she falls from the stage into the water
 - (D) This is done only for short periods of time since they will become waterlogged and be very heavy to pull up

If choice C is selected set score to 1.

- 7.** Which of the following describes a "whipping"?
- (A) A U-bolt for securing a cargo whip to the winch drum
 - (B) Turns of twine around a rope end
 - (C) A stopper for nylon line
 - (D) A messenger

If choice B is selected set score to 1.

- 8.** The periodic weight testing of a vessel's cargo booms may be performed by which organization?
- (A) Society of Naval Architects and Marine Engineers
 - (B) National Cargo Bureau
 - (C) American Bureau of Shipping
 - (D) U.S. Coast Guard

If choice C is selected set score to 1.

- 9.** When carrying a cargo of asphalt or molten sulfur, which are carried at temperatures of over 300°F, one of the biggest dangers is _____.
- (A) inadequate ullage space
 - (B) water in the tanks or pipelines
 - (C) explosion of vapors after discharge
 - (D) having the cargo too cool

If choice B is selected set score to 1.

- 10.** What is published by the U.S. Coast Guard?
- (A) Tide Tables
 - (B) Nautical Charts
 - (C) Light List
 - (D) U.S. Coast Pilot

If choice C is selected set score to 1.

- 11.** In the Northern Hemisphere, when the center of a high pressure system is due east of your position, you can expect winds from which direction?
- (A) South to west
 - (B) North to west
 - (C) North to east
 - (D) South to east

If choice D is selected set score to 1.

- 12.** The falls on gravity davits are required to be constructed from which material?
- (A) Manila
 - (B) Nylon
 - (C) Wire
 - (D) All of the above

If choice C is selected set score to 1.

- 13.** You must shore up the collision bulkhead due to solid flooding forward. The bulkhead approximates an inverted triangle. Where should the center of pressure of the shores on the bulkhead be located?
- (A) At the bottom of the bulkhead
 - (B) Approximately halfway up the bulkhead
 - (C) Approximately two-thirds of the way up the bulkhead
 - (D) Evenly over the surface of the bulkhead

If choice B is selected set score to 1.

- 14.** Your vessel is loaded with nonhygroscopic cargoes and is going from a cold to a warm climate. Which action should you take to avoid sweat damage while on the voyage?
- (A) Start the exhaust blowers
 - (B) Start the intake blowers
 - (C) Ventilate the cargo holds
 - (D) Do not ventilate the cargo holds

If choice D is selected set score to 1.

- 15.** Which vessel is most likely to be loaded full but not down?
- (A) A bulk carrier loaded with heavy ore
 - (B) A break bulk vessel loaded with palletized cargo
 - (C) A tanker loaded with heavy grain
 - (D) A bulk carrier loaded with steel

If choice B is selected set score to 1.

16. On a cargo vessels which fire extinguisher is considered semi-portable?

- (A) C-II
- (B) B-III
- (C) A-II
- (D) All of the above

If choice B is selected set score to 1.

17. Which is the strongest method of forming an eye in wire rope?

- (A) Three wire rope clamps
- (B) An eye splice with four or five tucks
- (C) A wire rope socket attached with zinc
- (D) A thimble fastened with four or five tucks

If choice C is selected set score to 1.

18. Which agency must approve the Safety equipment on board inspected vessels?

- (A) The National Safety Council
- (B) The U.S. Coast Guard
- (C) The Safety Standards Bureau
- (D) The Occupational Safety and Health Administration (OSHA)

If choice B is selected set score to 1.

19. 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 the falls from the main deck of the vessel
- (C) Rig only on the after falls
- (D) Rig only on the forward falls

If choice A is selected set score to 1.

20. When discharging clean ballast prior to entering a loading port, what must you do if it is determined the ballast exceeds 15 parts per million of oil?

- (A) the deballasting must be completed only after "load on top" has been completed
- (B) the deballasting must be terminated automatically
- (C) the deballasting must be completely discharged in order to load
- (D) the deballasting must be stopped until the oil can settle out, then resumed at a slower discharge rate

If choice B is selected set score to 1.

21. Line throwing apparatus aboard ship must contain which items?

- (A) Two rockets, one of which shall be the buoyant type
- (B) Three rockets, one of which shall be the buoyant type
- (C) Four rockets, two of which shall be the buoyant type
- (D) Five rockets, two of which shall be the buoyant type

If choice C is selected set score to 1.

22. Which is a characteristic of anticyclones?

- (A) Dry, fair weather
- (B) Gustiness and continuous precipitation
- (C) Overcast skies
- (D) High winds and cloudiness

If choice A is selected set score to 1.

23. 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 blown down
- (C) hoses are being disconnected
- (D) final topping off is occurring

If choice D is selected set score to 1.

24. The galley on your cargo vessel has an area of 2,900 square feet. What will fulfill the requirements for fire protection?

- (A) One B-I extinguisher
- (B) One B-II extinguisher
- (C) One B-II and one C-II extinguisher
- (D) One B-V extinguisher

If choice C is selected set score to 1.

25. Which knot in illustration D030DG below represents a timber hitch?

- (A) E
- (B) F
- (C) N
- (D) U

If choice A is selected set score to 1.

26. What can be expected with the presence of stratus clouds and a dying wind?

- (A) Clearing skies
- (B) Heavy snow
- (C) Thick fog
- (D) Heavy rain

If choice C is selected set score to 1.

27. 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 B-I extinguisher
- (B) One B-II extinguisher
- (C) One B-II and one C-II extinguisher
- (D) One B-V extinguisher

If choice B is selected set score to 1.

28. Which document is NOT required by law to be posted aboard a vessel?

- (A) Muster List
- (B) Official Crew List
- (C) Certificate of Inspection
- (D) Officer's licenses

If choice B is selected set score to 1.

29. Which publication contains information on navigation regulations, landmarks, channels, anchorages, tides, currents, and clearances of bridges for Chesapeake Bay?

- (A) Pilot Charts
- (B) Sailing Directions
- (C) Light List
- (D) Coast Pilot

If choice D is selected set score to 1.

30. "Thermal protective aids" are required for what percentage of the persons a survival craft is equipped to carry?

- (A) 10%
- (B) 50%
- (C) 75%
- (D) 100%

If choice A is selected set score to 1.

31. Great Lakes vessels, using liferafts, must have sufficient liferaft capacity on each side of the vessel to accommodate how many persons onboard?

- (A) 100% of the persons on board
- (B) 150% of the crew
- (C) 50% of the persons on board
- (D) 100% of the persons normally assigned to those spaces

If choice A is selected set score to 1.

32. The boom indicator tells the operator at what angle the boom is compared to the _____.

- (A) vertical position of the load being lifted
- (B) horizontal position of the load being lifted
- (C) vertical position of the boom
- (D) horizontal position of the boom

If choice D is selected set score to 1.

33. Which statement is FALSE concerning precautions during fueling operations?

- (A) A fire extinguisher should be kept nearby.
- (B) All engines, motors, fans, etc. should be shut down when fueling.
- (C) All windows, doors, hatches, etc. should be closed.
- (D) Fuel tanks should be topped off with no room for expansion.

If choice D is selected set score to 1.

34. If an inflatable liferaft is overturned, it may be righted by which action?

- (A) Filling the stabilizers on one side with water
- (B) Standing on the inflating cylinder and pulling on the straps on the underside of the raft
- (C) Releasing the CO2 cylinder
- (D) Pushing up from under one end

If choice B is selected set score to 1.

35. When the dew point of the outside air is higher than the dew point of the air in the cargo hold, which action should you take?

- (A) Do not ventilate the cargo holds
- (B) Ventilate the cargo holds
- (C) Energize the exhaust blowers
- (D) Energize the intake blowers

If choice A is selected set score to 1.

36. When you hear three short blasts on the ship's whistle and the same signal on the general alarm bells, which action should you take?

- (A) You are required to be at your liferaft, proceed there
- (B) You are dismissed from drills
- (C) You should point to the man overboard
- (D) You should start the fire pump

If choice B is selected set score to 1.

37. A tug should not come alongside a tank vessel in way of its cargo tanks while it is loading grade A, B, or C cargo without the permission of the _____.

- (A) the cognizant OCMI
- (B) person in charge of the transfer
- (C) local fire department
- (D) superintendent of the shoreside facility

If choice B is selected set score to 1.

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

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

If choice D is selected set score to 1.

39. What is the purpose of a striker plate?

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

If choice A is selected set score to 1.

40. What is the basic principle of the magnetic compass?

- (A) Magnetic materials of the same polarity repel each other and those of opposite polarity attract.
- (B) The Earth's magnetic lines of force are parallel to the surface of the Earth.
- (C) Magnetic meridians connect points of equal magnetic variation.
- (D) The compass needle(s) will, when properly compensated, lie parallel to the isogonic lines of the Earth.

If choice A is selected set score to 1.

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

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

If choice D is selected set score to 1.

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

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

If choice D is selected set score to 1.

43. How are cumulonimbus clouds formed?

- (A) In heavy rainstorms
- (B) By vertical air movements
- (C) By horizontal air movements
- (D) By any movement of moist air

If choice B is selected set score to 1.

44. Which instrument is designed to maintain a continuous record of atmospheric pressure?

- (A) A mercurial barometer
- (B) An aneroid barometer
- (C) A barograph
- (D) A thermograph

If choice C is selected set score to 1.

45. Which can be prevented only by segregating two lots of cargo into separate holds?

- (A) Contamination of dry cargo by a wet cargo
- (B) Contamination of a clean cargo by a delicate cargo
- (C) Overcarriage, overstowage, and short landing
- (D) Contamination of a food cargo by an odorous cargo

If choice D is selected set score to 1.

46. If you find an inflatable liferaft container with the steel bands still in place around its case, which action should you take?

- (A) Remove the bands yourself
- (B) Tell the Master immediately
- (C) Leave the bands in place
- (D) Inform the Mate so they can be cut loose

If choice C is selected set score to 1.

47. Which type of fog occurs on clear nights with very light breezes and forms when the earth cools rapidly?

- (A) Advection fog
- (B) Frontal fog
- (C) Radiation fog
- (D) Convection fog

If choice C is selected set score to 1.

48. Which agency maintains federal aids to navigation?

- (A) Maritime Administration
- (B) Corps of Engineers
- (C) Coast Guard
- (D) National Ocean Service

If choice C is selected set score to 1.

49. In plugging submerged holes; why are rags, wedges, and other materials used in conjunction with plugs?

- (A) To reduce the possibility of stress fractures
- (B) To prevent progressive flooding
- (C) To reduce the water leaking around the plugs
- (D) To reduce the water pressure on the hull

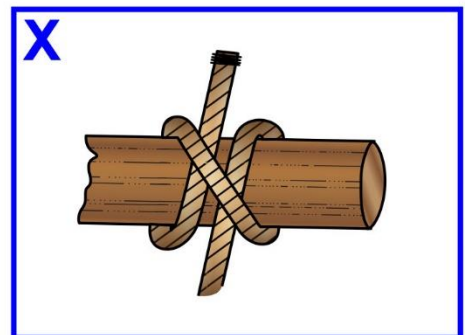
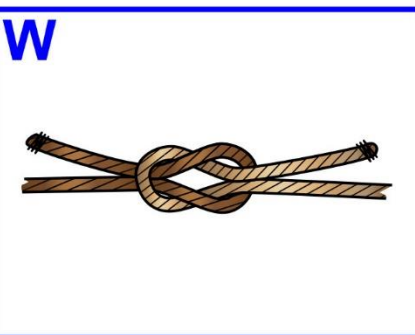
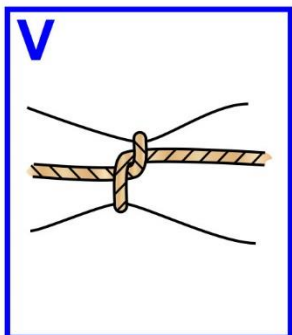
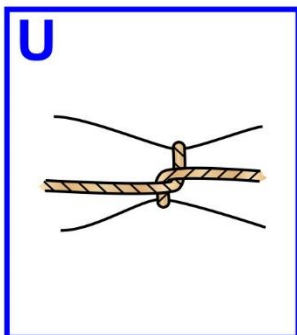
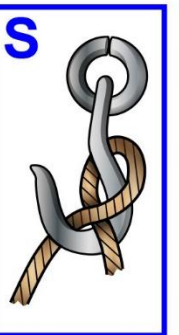
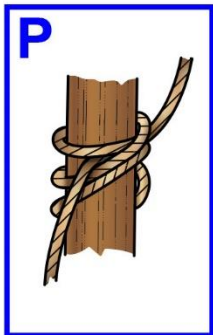
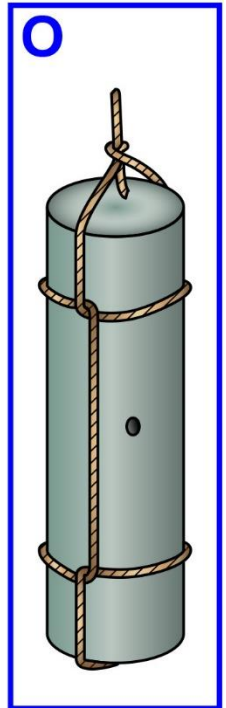
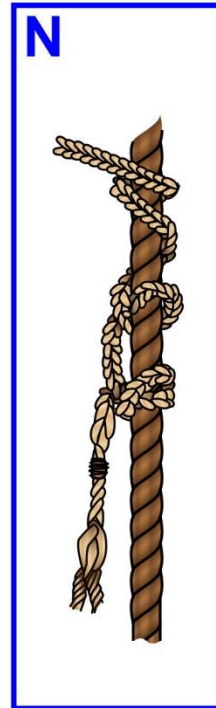
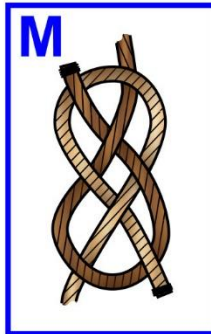
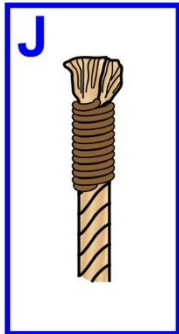
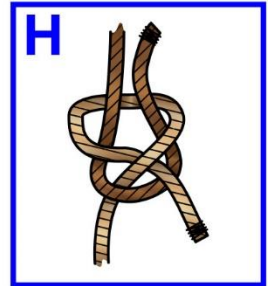
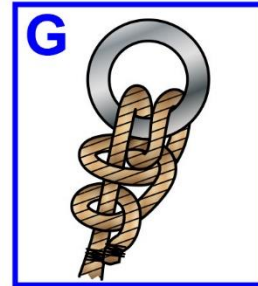
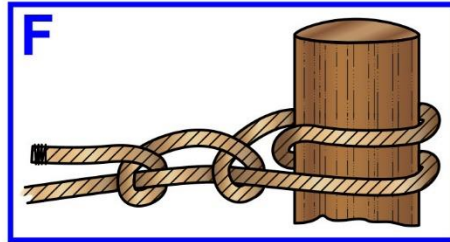
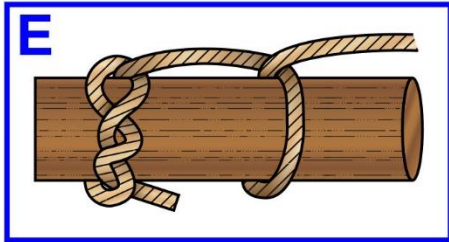
If choice C is selected set score to 1.

50. The most likely time for oil pollution while bunkering is when _____.

- (A) final topping off is occurring
- (B) first starting to receive fuel
- (C) hoses are disconnected and being capped
- (D) hoses are being blown down

If choice A is selected set score to 1.

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