

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 magnetic compass card is marked in how many degrees?

- A. 90
- B. 180
- C. 360
- D. 400

Correct answer: C

2. Which is TRUE for the connection facilities utilized for the international shore connection aboard the vessel?

- A. The facilities shall be as close as possible to the house
- B. The facilities shall be available on each side of the vessel
- C. There shall be a facility on each level of the accommodation space
- D. The facilities shall be on the main deck only

Correct answer: B

3. Which are associated with Cumulonimbus clouds?

- A. Dense fog and high humidity
- B. Clear skies with the approach of a cold front
- C. A rapid drop in barometric pressure followed by darkness
- D. Gusty winds, thunder, rain or hail, and lightning

Correct answer: D

4. Using a safety factor of five, determine what is the safe working load for 3-1/2-inch manila line with a breaking stress of 4.9 tons.

- A. 0.82 ton
- B. 0.98 ton
- C. 2.45 tons
- D. 12.25 tons

Correct answer: B

5. Which statement is TRUE concerning the life buoy on your small passenger vessel? (Length 28 feet)

- A. The life buoy(s) must be readily accessible
- B. The life buoy(s) must be tied securely to the vessel
- C. All life buoy(s) must be orange in color
- D. Life buoys are not required to be fitted with lifelines

Correct answer: A

6. Which space(s) on your cargo vessel must have a fire detection system?

- A. Any compartment containing explosives
- B. Any compartment adjacent to one containing explosives
- C. Enclosed spaces which are "specially suitable for vehicles"
- D. All of the above

Correct answer: D

7. When a buoy is in position only during a certain period of the year, where may the dates when the buoy is in position be found?
- A. Light List
 - B. Coast Pilot
 - C. Notice to Mariners
 - D. On the chart

Correct answer: A

8. On an inspected vessel, when may a stability test be dispensed with?
- A. Coast Guard does not have a qualified inspector available
 - B. The projected cost is unreasonable
 - C. The vessel is of a proven design
 - D. Coast Guard has the approved stability test results of a sister vessel

Correct answer: D

9. As a vessel changes course to starboard, which is TRUE concerning the compass card in a magnetic compass?
- A. The card remains aligned with compass north
 - B. It first turns to starboard then counterclockwise to port
 - C. The card turns counterclockwise to port
 - D. The card also turns to starboard

Correct answer: A

10. The load chart of a crane enables the operator to combine the load radius with boom length to determine the _____.
- A. hoist rope strength
 - B. allowable load
 - C. maximum counterweight required
 - D. minimum horsepower required

Correct answer: B

11. What publication has information on the climate, distances, navigation regulations, outstanding landmarks, channels and anchorages of Long Island Sound?
- A. Pilot Chart
 - B. Sailing Directions
 - C. Coast Pilot
 - D. Light List

Correct answer: C

12. According to regulations, when must limit switches, winches, falls, etc. be thoroughly inspected and repaired as needed?

- A. Once a year
- B. 2 months
- C. 6 months
- D. 4 months

Correct answer: A

13. If your vessel is equipped with inflatable liferafts, how should they be maintained?

- A. Have your crew check them annually.
- B. They do not need any maintenance.
- C. Have them serviced by the shipyard annually.
- D. Have them sent ashore to an approved maintenance facility annually.

Correct answer: D

14. Static electricity may be built up by the _____.

- A. flow of petroleum through pipes
- B. settling of solids or water in petroleum
- C. spraying or splashing of petroleum
- D. All of the above

Correct answer: D

15. Where a propeller shaft passes through the hull, which device prevents water from entering the hull?

- A. Stop-water
- B. Propeller boss
- C. Sea cock
- D. Stuffing box

Correct answer: D

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

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

Correct answer: C

17. Which statement about the use of portable electric lights in petroleum product tanks is TRUE?

- A. They must be explosion-proof, self-contained, battery-fed lamps.
- B. They can be used only when the compartment is gas free.
- C. No portable electric equipment of any type is allowed.
- D. The fixture must be explosion-proof, and the line must have a ground wire.

Correct answer: A

18. It is the responsibility of the crane operator to, at all times, be aware of the location of the _____.

- A. load
- B. hook
- C. boom
- D. All of the above

Correct answer: D

19. Which agency must approve the safety equipment on board inspected vessels?

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

Correct answer: A

20. What does a slow rise in the barometric pressure forecast?

- A. High seas
- B. Improving weather conditions
- C. Rainy weather for the next 48 hours
- D. Deteriorating weather conditions

Correct answer: B

21. Which is a precaution you should take before bunkering?

- A. Plug the sounding pipes
- B. Close the lids on the vents
- C. Plug the vents
- D. Plug the scuppers

Correct answer: D

22. In order to reduce the accumulation of static electricity while loading petroleum products, you should _____.

- A. start to load at maximum pressure
- B. start to load slowly
- C. increase the air flow into the tank
- D. use the overall method of loading only

Correct answer: B

23. 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

Correct answer: A

24. Where must a pressure gauge for each fire pump on a tankship be located?

- A. At each fire station discharge
- B. At the pump discharge
- C. At the pump station
- D. At the manifold connection

Correct answer: B

25. Which of the signals listed is required to be displayed at night while bunkering at a dock?

- A. One red light over a white light
- B. One red light
- C. One red light over a yellow light
- D. Two red lights

Correct answer: B

26. Which is the proper way to coil right-laid line?

- A. The line can only be coiled on a reel
- B. Clockwise or with the sun
- C. Counterclockwise or against the sun
- D. Either clockwise or counterclockwise

Correct answer: B

27. The falls on gravity davits are required to be constructed from which material?

- A. Wire
- B. Manila
- C. Nylon
- D. All of the above

Correct answer: A

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

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

Correct answer: B

29. Which condition must be met during a stability test on an inspected vessel?

- A. All dunnage, tools, and extraneous items are secured
- B. Water under vessel must be deep enough to prevent grounding
- C. The vessel must be moored snugly
- D. Each tank must be partially full to show it does not leak

Correct answer: B

30. Which of the following statements is/are TRUE in regard to Ro-Ro vessels' spaces that are "specially suitable for vehicles"?

- A. The spaces are prohibited from being fitted with fixed CO2 fire extinguishing systems.
- B. The spaces shall have designated smoking areas.
- C. The spaces shall be fitted with an approved fire or smoke detecting system.
- D. All of the above

Correct answer: C

31. If a vessel takes a sudden, severe list or trim from an unknown cause, which action should you take FIRST?

- A. Assume the shift is due to off-center loading
- B. Determine the cause before taking countermeasures
- C. Counterflood
- D. Assume the cause is environmental forces

Correct answer: B

32. In which location are lifejackets required to be stowed?

- A. In the forepeaks
- B. In the pumproom
- C. Readily accessible spaces
- D. Locked watertight containers

Correct answer: C

33. Which action must be taken annually concerning inflatable liferafts carried on passenger vessels?

- A. Shall be sent to a Coast Guard approved service facility
- B. They shall be sent to the Coast Guard for servicing
- C. Shall be sent to the steamship company shore repair facility
- D. They are required to be overhauled by the ship's crew

Correct answer: A

34. On a clear, warm day, you notice the approach of a tall cumulus cloud. The cloud top has hard well-defined edges and rain is falling from the dark lower edge. What should you expect if this cloud passes directly overhead?

- A. The wind speed will not change as it passes
- B. The wind will back as it passes
- C. A sudden decrease in wind speed
- D. A sudden increase in wind speed

Correct answer: D

35. When observing a rapid rise in barometric pressure, what may you expect?

- A. Deteriorating weather with rain or snow
- B. Clear weather with no wind, but the possibility of rain or snow within 24 hours
- C. Clearing weather, possibly accompanied by high winds
- D. Heavy rain or severe thundershowers

Correct answer: C

36. The wooden plug inserted in the vent of a damaged tank should be removed if you are going to _____.

- A. abandon ship
- B. fight a fire
- C. use the crossover system
- D. pump from the damaged tank

Correct answer: D

37. What is the purpose of the hydrostatic release on an inflatable liferaft?

- A. To inflate the raft automatically
- B. To release the raft from the cradle automatically as the ship sinks
- C. To test the rafts hydrostatically
- D. None of the above

Correct answer: B

38. A common class of wire rope is the 6X37 class. What does the 37 represent?

- A. Number of wires in the inner core
- B. Number of wires per strand
- C. Number of strands per wire rope
- D. Tensile strength of the wire

Correct answer: B

39. Fog generally clears when the _____.

- A. temperature increases
- B. wind direction changes
- C. wind speed increases
- D. All of the above

Correct answer: D

40. Which knot is used to attach two different sized lines together?

- A. Granny knot
- B. Sheet bend
- C. Thief knot
- D. Square knot

Correct answer: B

41. Which agency publishes the Light Lists?

- A. Army Corps of Engineers
- B. Oceanographic Office
- C. National Ocean Service
- D. United States Coast Guard

Correct answer: D

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

- A. A mercurial barometer
- B. A barograph
- C. A thermograph
- D. An aneroid barometer

Correct answer: B

43. What is the purpose of a striking plate?

- A. It provides a surface for applying force on machinery
- B. It absorbs machinery vibration
- C. It provides a landing surface for the sounding bob
- D. It prevents valve stem over-travel

Correct answer: C

44. 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 or post 2017 One 10-B:C 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 Two 40-B:C extinguishers
- D. One B-V extinguisher or post 2017 One 160-B extinguisher

Correct answer: C

45. As a general guide, under which condition should hygroscopic cargoes be ventilated?

- A. When the dew point of the air in the hold is very low
- B. When the outside dew point is 60°F (16°C) and the cargo temperature is 54°F (12°C)
- C. When the dew point of the outside air is greater than the dew point of the air in the hold
- D. When going from a warm to a cold climate

Correct answer: D

46. Sweat damage in a hatch full of canned goods in cartons will occur when which condition exists?

- A. When the air temperature is higher than the temperature of the cargo
- B. When the dew point is higher than the temperature of the cargo
- C. When the dew point is lower than the temperature of the cargo
- D. When the air temperature is lower than the temperature of the cargo

Correct answer: B

47. Fog forms when the air temperature is at or below _____.

- A. the dew point
- B. 32°F
- C. the wet bulb temperature
- D. the dry bulb temperature

Correct answer: A

48. Which sequence is correct when launching a lifeboat stowed in gravity davits?

- A. Release gripes, turn on emergency disconnect switch, release frapping lines
- B. Release gripes, lift brake, release tricing pennants
- C. Operate limit switches, release gripes, lift brake
- D. Release tricing pennants, turn on emergency disconnect switch, release frapping lines

Correct answer: B

49. Life jackets should be marked with which item?

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

Correct answer: B

50. What is acceptable flame screening?

- A. A fitted single brass screen of 10 x 10 mesh
- B. A fitted single stainless-steel screen of 15 x 15 mesh
- C. Two fitted brass screens of 10 x 15 mesh spaced 1/2 inch apart
- D. A fitted stainless-steel screen of 30 x 30 mesh

Correct answer: D