

U.S.C.G. Merchant Marine Exam

Master Less than 100 GRT to Master or Mate
Less than 200 GRT Oceans or Near Coastal

Q156 Navigation and Deck General – Safety

(Sample Examination)

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

1. All lifeboats, rescue boats, and rigid type liferafts shall be stripped, cleaned, and thoroughly overhauled at which time interval?
- A. 6 months
 - B. Yearly
 - C. 18 months
 - D. Every two years

Correct answer: B

2. Which is TRUE for the connection facilities utilized for the international shore connection aboard the vessel?
- A. The facilities shall be on the main deck only
 - B. The facilities shall be as close as possible to the house
 - C. The facilities shall be available on each side of the vessel
 - D. There shall be a facility on each level of the accommodation space

Correct answer: C

3. What is the required minimum length of the painter for a lifeboat in ocean service?
- A. The distance from the main deck to the light waterline
 - B. Two times the distance from the stowage position of the boat to the light waterline or 50 feet whichever is greater
 - C. 60 fathoms
 - D. Twice the distance from the main deck to the light waterline or 50 feet whichever is greater

Correct answer: B

4. A petroleum liquid has a flash point of 85°F. What grade of oil is this?
- A. B flammable liquid
 - B. C flammable liquid
 - C. D combustible liquid
 - D. E combustible liquid

Correct answer: C

5. Flammable liquid means any liquid which gives off flammable vapors at or below _____.
- A. 40°F (4.4°C)
 - B. 80°F (26.7°C)
 - C. 110°F (43.3°C)
 - D. 150°F (65.6°C)

Correct answer: B

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

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

Correct answer: A

7. On 7 December your 0350 ZT position is LAT 35°42'N, LONG 17°38'E. You observe Polaris bearing 359.7°pgc. At the time of the observation the helmsman noted that he was heading 016°pgc and 014°psc. The variation is 1°E. What is the deviation for that heading?

- A. 0.3°E
- B. 1.5°E
- C. 0.3°W
- D. 1.5°W

Correct answer: A

8. According to Coast Guard Regulations (46 CFR), when loading, or discharging oil in bulk at a dock, which of the following signals must be displayed?

- A. A red flag (day), red light (night)
- B. A yellow flag (day), red light (night)
- C. A green flag (day), green light (night)
- D. A signal is not required for discharging oil, only gasoline

Correct answer: A

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

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

Correct answer: A

10. A thrust bearing is designed to accomplish which action?

- A. To absorb the shock of wave pressure at the bow
- B. To transmit the thrust of the engine to the propeller
- C. To transmit the thrust of the propeller to the vessel
- D. To be placed between the engines and the foundation to absorb the vibration

Correct answer: C

11. The tops of the thwarts, side benches, and the footings of a lifeboat are painted which color?

- A. Brown
- B. Vivid Redish Orange
- C. Gray
- D. Tanish Gray

Correct answer: B

12. Regulations concerning the stowage, lashing, and securing of timber deck cargoes aboard general cargo vessels may be found in the _____.
- A. International Cargo Bureau Regulations
 - B. Rules and Regulations for Cargo and Miscellaneous Vessels
 - C. CFR Load Line Regulations
 - D. vessel's classification society rules and regulations

Correct answer: C

13. A vessel is constructed with a steel hull and an aluminum superstructure. Which statement is TRUE?
- A. If the superstructure is stressed, an aluminum structure requires additional expansion joints to prevent fracture.
 - B. The aluminum will provide greater resistance to the spread of fire by conduction.
 - C. The aluminum structure is usually attached to a steel coaming by a method that insulates the two metals.
 - D. The steel at the area of the aluminum-to-steel connection must be closely checked for galvanic corrosion.

Correct answer: C

14. Which type of hull damage should be repaired FIRST?
- A. Damage in way of machinery rooms
 - B. Damage at or just above the waterline
 - C. Damage to interior watertight boundaries
 - D. Damage below the waterline

Correct answer: B

15. You are testing the external inflation bladder on an immersion suit and find it has a very slow leak. Which is the BEST action to be taken?
- A. Take it out of service and repair in accordance with the manufacturer's instructions.
 - B. Replace the suit.
 - C. Replace the inflation bladder.
 - D. Some leakage should be expected and a topping off tube is provided; no other action is necessary.

Correct answer: A

16. You depart LAT 33°45.0'N, LONG 118°30.0'W, and steam 2216 miles on course 250°T. What is the longitude of your arrival by Mercator sailing?
- A. LONG 157°31.0'W
 - B. LONG 156°08.0'W
 - C. LONG 156°36.0'W
 - D. LONG 157°21.0'W

Correct answer: A

17. Which of the following is the most accurate method of determining gyrocompass error while underway?

- A. It cannot be determined accurately at sea due to drift of unknown currents
- B. Determining from the chart the course made good between celestial fixes
- C. Comparing the gyro heading with the magnetic compass heading
- D. Comparing the gyro azimuth of a celestial body with the computed azimuth of the body

Correct answer: D

18. You must shore up a bulkhead due to solid flooding forward. The bulkhead approximates a rectangle. Where should the center of pressure of the shores be located on the bulkhead?

- A. Approximately one-third of the way up the bulkhead
- B. Evenly over the surface of the bulkhead
- C. At the bottom of the bulkhead
- D. Approximately halfway up the bulkhead

Correct answer: A

19. Where is a permanently installed system of gas detection required?

- A. Cargo compressor rooms
- B. Cargo pump rooms
- C. Air locks
- D. All of the above

Correct answer: D

20. The strength of a deck will be increased by adding which item?

- A. Deck beam brackets
- B. Camber
- C. Hatch beams
- D. Sheer

Correct answer: A

21. Regulations define the bulkhead deck as _____. (subdivision and stability regulations)

- A. the uppermost deck to which transverse watertight bulkheads extend
- B. the lowermost deck to which transverse watertight bulkheads extend
- C. the uppermost complete deck
- D. any deck extending from stem to stern

Correct answer: A

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

- A. Flash point
- B. Volatility
- C. Specific heat
- D. Viscosity

Correct answer: B

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

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

Correct answer: C

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

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

Correct answer: B

25. Which is TRUE for the directive force acting on a gyrocompass?

- A. The force increases as the latitude increases, being maximum at the geographic poles
- B. The force remains the same at all latitudes
- C. The force increases as the latitude decreases, being maximum at the geographic equator
- D. The force is greatest when a vessel is near the Earth's magnetic equator

Correct answer: C

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

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

Correct answer: D

27. A vessel having continuous closely spaced transverse strength members is _____.

- A. web framed
- B. longitudinally framed
- C. transversely framed
- D. cellular framed

Correct answer: C

28. Which statement is TRUE concerning distress signals in a survival craft?

- A. Two hand-held smoke signals shall be provided.
- B. If hand-held rocket-propelled parachute flares are provided, they are the only distress signals required.
- C. Handheld flares and orange smoke signals are required.
- D. A Very pistol with twelve flares is required.

Correct answer: C

29. If you are unable to stop a diesel engine by any other means, which action can you take?

- A. Discharge a CO₂ extinguisher in the air inlet
- B. Secure the jacket water
- C. Pull off the distributor cap
- D. Secure the starting air supply valve

Correct answer: A

30. What is the minimum number of fire pumps required on a cargo vessel of 900 GT?

- A. 1
- B. 2
- C. 3
- D. 4

Correct answer: A

31. On 7 April in DR position LAT 27°42.0'N, LONG 114°03.0'W, you observe an amplitude of the Sun. The Sun's center is on the celestial horizon and bears 076°psc. The chronometer reads 02h 10m 17s and is 01m 52s slow. Variation in the area is 8°E. What is the deviation of the standard magnetic compass?

- A. 1.8°W
- B. 2.3°E
- C. 6.2°E
- D. 7.8°W

Correct answer: A

32. What is an advantage of a steam turbine over a diesel for the main propulsion?

- A. Faster response from ahead to astern
- B. Cheaper initial installation cost
- C. Less fuel consumption
- D. Less time from secured plant to fully operational

Correct answer: A

33. Cargo vessels being navigated, and fitted with emergency lighting and power systems, shall have their emergency systems tested at which interval?

- A. Once in every 12 months
- B. At least once in each week
- C. Once in every 6 months
- D. At least once in each month

Correct answer: B

34. Which statement is TRUE when loading a tanker?

- A. Keep the seamen on watch on standby in the messroom
- B. Load only one tank at a time
- C. Keep a strain on the loading hoses
- D. Close valves by closing them down, reopening one or two turns, and re-closing

Correct answer: D

35. In illustration D016SA below, the line indicated by number 4 is connected to which of the following?

- A. McCluny hook
- B. Fleming gear
- C. Releasing gear
- D. Sea painter

Correct answer: A

36. If an inflatable liferaft is to be released manually, where should the operating cord be attached before throwing the raft overboard?

- A. Attach the cord to a fixed object on the ship.
- B. Attach the cord to the special pad eye on the "raft davit launcher".
- C. Do not attach the cord to anything but throw it overboard with the raft container.
- D. You should stand on the cord.

Correct answer: A

37. Small hull leaks can be temporarily repaired by _____.

- A. seizing
- B. caulking
- C. parceling
- D. parbuckling

Correct answer: B

38. Which commodity would be regulated by subchapter D, Rules and Regulations for Tank Vessels?

- A. Benzene
- B. Asphalt
- C. Vinyl Chloride
- D. All of the above

Correct answer: B

39. In accordance with Coast Guard Regulations, which statement is TRUE with regards to Coast Guard approved buoyant work vests?

- A. The vests may be used as a substitute for approved life preservers during routine drills, but never during an emergency
- B. They should be stowed in engineering spaces in lieu of approved life jackets because they are less bulky and permit free movement in confined spaces
- C. A work vest should not be stowed where they could be confused with life jackets in an emergency
- D. All of the above

Correct answer: C

40. On an inspection of your tankship you notice that there are no portable fire extinguishers in the pumproom. Which is TRUE when complying with regulations?
- A. You need not be concerned since no portable extinguishers are required in the pumproom
 - B. One B-II extinguisher or post 2017 One 40-B extinguisher in the lower pumproom is required
 - C. You may substitute sand for the required extinguishers in the upper section of the pumproom to meet current requirements
 - D. One B-II extinguisher or post 2017 One 40-B:C extinguisher in the vicinity of the exit is required

Correct answer: B

41. For any given pedestal crane, when the boom is lengthened, the lifting capacity is _____.
- A. increased
 - B. unchanged
 - C. decreased
 - D. eliminated

Correct answer: C

42. According to regulations, when must limit switches, winches, falls, etc. be thoroughly inspected and repaired as needed?
- A. 4 months
 - B. 2 months
 - C. Once a year
 - D. 6 months

Correct answer: C

43. If an engine shuts down due to high jacket water temperature, what action should be taken?
- A. Allow engine to cool gradually
 - B. Slowly add cool water to the expansion tank
 - C. Back flush the cooling water system
 - D. Open crankcase explosion covers

Correct answer: A

44. Which of the signals listed is required to be displayed during the day while bunkering?
- A. A red flag
 - B. A red light
 - C. A red and yellow flag
 - D. A yellow flag

Correct answer: A

45. The most detrimental effect on initial stability is a result of liquids _____.
- A. flowing in and out of a holed wing tank
 - B. pocketing in a slack tank as a vessel heels
 - C. flowing from side to side within the vessel
 - D. flowing from fore to aft within a vessel

Correct answer: A

46. The signal man assisting the crane operator has his arm extended and is pointing his finger in the direction to move the boom. This is the signal to _____.
- A. extend
 - B. lower
 - C. hoist
 - D. swing

Correct answer: D

47. If you are bunkering and you close off one tank in the line of tanks being filled, what happens to the rate of flow to other open tanks on the same line?
- A. The rate of flow remains constant to the open tanks
 - B. The rate of flow decreases to the open tanks
 - C. The rate of flow stops to the open tanks
 - D. The rate of flow increases to the open tanks

Correct answer: D

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

Correct answer: A

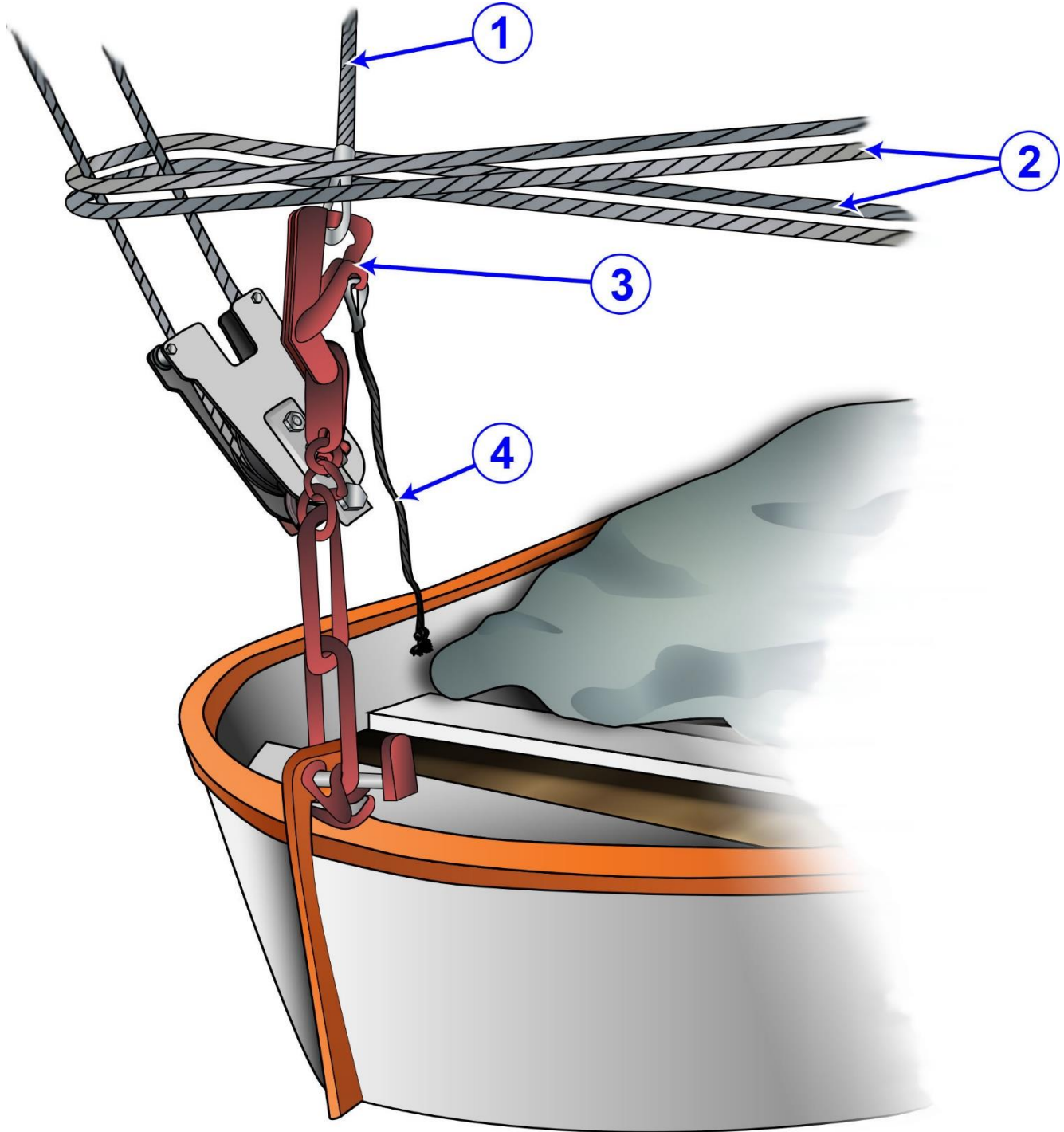
49. On an oceangoing vessel, for each person a lifeboat (without desalting kits) is certified to carry, what must the boat be supplied with?
- A. 2 pounds of condensed milk
 - B. A life preserver
 - C. 3 liters of water
 - D. A signaling whistle

Correct answer: C

50. How should you warm up a diesel engine that has not been run for some time?
- A. Inject ether into the air intake to shorten warm up time.
 - B. Idle for a brief period of time and then warm up at half speed.
 - C. Run it at minimum speed until warmed to operating temperature.
 - D. Bring it up to top speed immediately and run until warmed up.

Correct answer: B

D016SA



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