

U.S.C.G. Merchant Marine Exam

Second Mate to Master
Less than 1600 Gross Registered Tons

Q130 Deck General – Safety

(Sample Examination)

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

1. As a general rule, how will your vessel lie when it is drifting in a locale where there is no current?
- A. The bow to the wind
 - B. With the wind on the quarter
 - C. The beam to the wind
 - D. The stern to the wind

Correct answer: C

2. In relation to the turning circle of a ship, which describes the term "kick"?
- A. The distance gained in the direction of the original course when the helm is hard over
 - B. The lateral slide away from the direction of turn upon putting the helm hard over
 - C. The distance gained at right angles to the original course
 - D. The distance around the circumference of the turning circle

Correct answer: B

3. The Officers Competency Certificates Convention of 1936 applies to all of these vessels operating seaward of the boundary line. Which vessel is exempt?
- A. An uninspected towing vessel of less than 200 gross tons
 - B. An inspected towing vessel of 305 gross tons
 - C. A passenger vessel of 295 gross tons
 - D. An offshore supply vessel over 200 gross tons

Correct answer: A

4. For towing vessels over 100 gross tons that are permitted to maintain a two-watch system, what percentage of the deck crew must be able seafarers?
- A. 50%
 - B. 65%
 - C. 75%
 - D. 100%

Correct answer: A

5. In the United States, which organization sets the load line markings?
- A. Coast Guard
 - B. IMO
 - C. Federal Maritime Board
 - D. American Bureau of Shipping

Correct answer: D

6. What is the primary use of antiseptics?

- A. To speed healing
- B. To reduce inflammation
- C. To increase blood circulation
- D. To prevent infection

Correct answer: D

7. A vessel proceeding to London, England, from New York makes an unscheduled call at the port of Hamilton, Bermuda. What term is used to denote the voluntary departure from the usual course?

- A. Unscheduled stop
- B. Liberty
- C. Alteration
- D. Deviation

Correct answer: D

8. The S.S. Hollowpoint has a charter party in which the charterer assumes no responsibility for the operation of the vessel but pays stevedoring expenses. What is the name of the charter party?

- A. Voyage
- B. Dispatch
- C. Bareboat
- D. Demise

Correct answer: A

9. The American Consul has asked the Master of a vessel bound for a port in the U.S. to transport a destitute seaman back to the U.S. Which action may the Master take?

- A. He may refuse to take the seaman if the seaman has a contagious disease.
- B. He is required to accept the seaman only if the seaman is medically unfit.
- C. He is required to take the seaman under any circumstance.
- D. He may refuse to take the seaman if the ship will not stop at a U.S. port within 30 days.

Correct answer: A

10. You have abandoned your vessel and are the person in charge of lifeboat No. 2. Which procedure should be followed when landing a boat under oars through a slight surf?

- A. Head into the beach, row steadily and swiftly as possible until land is reached
- B. Head into the seas, tripping the sea anchor and resetting between swells to allow back-watering to the beach
- C. Head into the beach, tripping the sea anchor from the stern while steadily rowing towards the beach
- D. Head into the seas and drift astern with the sea anchor deployed until land is reached

Correct answer: B

- 11.** Your vessel is damaged and listing to port. The rolling period is long, and the vessel will occasionally assume a starboard list. Which action should you take FIRST?
- A. Press up a slack centerline double bottom tank
 - B. Transfer all possible movable weights from port to starboard
 - C. Fill an empty double bottom tank on the starboard side
 - D. Pump out ballast from the port and starboard double bottom tanks

Correct answer: A

- 12.** You are signing on a crew. You can determine the minimum number and qualifications of the crew that you are required to carry by consulting which document?
- A. Articles of Agreement
 - B. Fo'c'sle card
 - C. Certificate of Inspection
 - D. Crew list

Correct answer: C

- 13.** What is the placement requirement for the number or name of a tank barge?
- A. It shall be displayed in at least 4 different positions on the barge
 - B. Displayed at the highest point of the barge's hull such that it can be seen from either side
 - C. It shall be carved on a wooden board and attached to the barge's hull
 - D. It shall be displayed as close to the navigation lights as possible

Correct answer: B

- 14.** Where can the deepest water when rounding a bend in a river be located?
- A. Toward the center of the river just before the bend, then change course for the river's center after the bend
 - B. Toward the inside of the bend
 - C. In the center of the river
 - D. Toward the outside of the bend

Correct answer: D

- 15.** Addition of weight to a vessel will ALWAYS _____.
- A. reduce reserve buoyancy
 - B. increase righting moments
 - C. increase GM
 - D. All of the above

Correct answer: A

16. The Immigration and Naturalization Service is concerned with which document on a vessel making preliminary entry into a U.S. port from a foreign port?

- A. Shipping Articles
- B. Curio List
- C. Crew List form I-418
- D. Certified Cargo Manifest

Correct answer: C

17. When taking a Pilot from a pilot vessel in a seaway, which way should you head your vessel if the ladder is on the leeward side?

- A. Sea on the quarter with sternway on the ship
- B. Sea on the weather bow and ship moving ahead slowly
- C. Sea on the lee quarter with ship moving ahead slowly
- D. Bow to the sea and no way on your vessel

Correct answer: B

18. Under U.S. law, what is the penalty for assaulting the Master?

- A. Fine of not more than \$500 and/or imprisonment for not more than 1 year
- B. Revocation of the Merchant Mariner Credential
- C. Imprisonment for not more than 2 years
- D. Fine of not more than \$1000

Correct answer: C

19. If an alien stowaway is discovered aboard your vessel, which action should you take?

- A. Place his/her name and port boarded on the Alien Crew List
- B. Place his/her name on a separate Passenger List marked stowaways
- C. Place his/her name at the end of the Crew List
- D. Place his/her name on the Passenger List

Correct answer: B

20. You are loading in a port governed by the tropical load line mark for a voyage to a port governed by the winter mark. The freshwater allowance is 5 inches, and the hydrometer reads 1.005. Which statement is TRUE?

- A. You may load to the tropical mark plus 1-inch brackish water allowance.
- B. You may only load to the winter mark plus a brackish water allowance of 4 inches.
- C. Your draft must not exceed the winter mark plus the freshwater allowance upon arrival off the discharge port.
- D. You must load so that each zone mark will not be submerged upon entering the zone.

Correct answer: D

21. A vessel aground may have negative GM since the _____.

- A. displacement lost acts at the point where the ship is aground
- B. lost buoyancy method is used to calculate KM, and KB is reduced
- C. virtual rise of G is directly proportional to the remaining draft
- D. decrease in KM is equal to the loss of draft

Correct answer: A

22. Normally, your vessel is on a voyage of three months duration. How many sanitary inspections are required to be conducted during the voyage?

- A. one
- B. three
- C. six
- D. twelve

Correct answer: A

23. Your vessel is required to have a slop chest. Which of the following articles is NOT required by law to be carried in the slop chest?

- A. Foul weather clothing
- B. Blankets
- C. Candy
- D. Tobacco products

Correct answer: C

24. You are on a 120,000 DWT loaded bulk carrier. What is a safe docking speed when approaching a berth?

- A. Any speed in a head current
- B. Any speed in a following current
- C. Bare steerageway
- D. 5 knots

Correct answer: C

25. You have steamed 632 miles at 18.5 knots and consumed 197 tons of fuel. If you have 278 tons of usable fuel remaining, how far can you steam at 15.0 knots?

- A. 1357 miles
- B. 1100 miles
- C. 892 miles
- D. 681 miles

Correct answer: A

26. When launching a lifeboat, when should frapping lines be rigged?

- A. Before the boat is moved from the davits
- B. Before the gripes are released
- C. When the boat is at the embarkation deck
- D. Only after the boat is in the water

Correct answer: C

27. You are docking a vessel. Which statement is TRUE?

- A. You should go in with the current
- B. You should pass a mooring line to the dock and let the crew pull the vessel to
- C. You should go in against the current
- D. You should approach the dock at a 90° angle

Correct answer: C

28. When paying off seamen in a foreign port, where a United States consul is not available, the release must be executed by the seamen and which other person?

- A. A representative of the foreign country
- B. The local port authority representative
- C. The Master of the vessel
- D. The ship's union delegate

Correct answer: C

29. What is the period of validity of a De-Rat certificate?

- A. Specific voyage
- B. 6 months
- C. 1 year
- D. 2 years

Correct answer: B

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

Correct answer: A

31. When you enter shallow water, which describes your vessel's rudder response and speed variations?

- A. The response will be sluggish and your speed will decrease
- B. The response will be sluggish and your speed will increase
- C. The response will improve and your speed will decrease
- D. The response will improve and your speed will increase

Correct answer: A

32. Steering a motor lifeboat broadside to the sea could cause it to _____.

- A. sink
- B. capsize
- C. run faster
- D. run smoother

Correct answer: B

33. Which of the following defines the difference between the free-floating displacement and the KB of a grounded vessel?

- A. Reserve buoyancy
- B. Transverse stability
- C. Inclining moment
- D. Grounding force

Correct answer: D

34. When should the lubricating oil be changed on a heavy-duty diesel engine?

- A. When it has been in use for a specified interval
- B. Only when a sample rubbed between fingers feels thin
- C. When it gets dark in color
- D. When it no longer supports combustion

Correct answer: A

35. An International Tonnage Certificate will be issued to a vessel when it meets several requirements. Which is one of the requirements?

- A. Will engage in intercoastal trade
- B. Admeasure over 100 GT
- C. Has been issued a Certificate of Inspection
- D. Must be 79 or more feet in length

Correct answer: D

36. What is NOT considered maritime property in a salvage claim?

- A. Cargo
- B. Semi-submerged shipwreck
- C. Sea plane
- D. Buoys

Correct answer: D

37. The number of certificated able seamen and lifeboatmen required on a vessel is determined by which organization?

- A. International Maritime Organization
- B. American Bureau of Shipping
- C. Coast Guard
- D. Corps of Engineers

Correct answer: C

38. The Safety of Life at Sea Convention was developed by which organization?

- A. International Maritime Organization
- B. U.S. Coast Guard
- C. American Institute of Maritime Shipping
- D. American Bureau of Shipping

Correct answer: A

- 39.** The decision has been made to make landfall through a slight surf in an oar-propelled lifeboat. How should the sea anchor be utilized?
- A. keep a strain on the tripping and towing lines, as the wave overtakes the craft release the tripping line and backwater
 - B. keep a strain on the towing and tripping lines to control the advancement of the craft as the waves roll onto the beach
 - C. secure the towing line, as the wave overtakes the craft pull on the tripping line and order backwater to advance to the beach
 - D. secure the tripping line, as the wave overtakes the craft release the towing line so the craft can advance to the beach

Correct answer: C

- 40.** What is the function of an air receiver in the compressed air system?
- A. Condenses moisture
 - B. Provides overpressure protection
 - C. Utilized to store compressed air
 - D. Purifies the air

Correct answer: C

- 41.** You are approaching the pilot station with the wind fine on the starboard bow and making about 3 knots. You can help to calm the seas by taking what action just before the pilot boat comes along on the port side?
- A. Backing full
 - B. Giving right full rudder
 - C. Stopping the engines
 - D. A short burst of ahead full with left full rudder

Correct answer: D

- 42.** Aboard damaged vessels, the MOST important consideration is preserving which item?
- A. Level attitude
 - B. Instability
 - C. Reserve buoyancy
 - D. Bilge pumping capacity

Correct answer: C

- 43.** You have determined the maneuvering characteristics of your vessel by taking radar ranges and bearings of an isolated light while making a turn. The results are shown in illustration D035DG below. What is the transfer for a turn of 90°?
- A. 400 yards
 - B. 430 yards
 - C. 485 yards
 - D. 525 yards

Correct answer: A

44. In most cases, when large tankers or bulk carriers enter shallow water at high speed which situation can be expected?

- A. The vessel will rise slightly, on a level plane
- B. The bow will squat farther than the stern
- C. The vessel's speed will increase
- D. The vessel's maneuverability will increase

Correct answer: B

45. You are docking a vessel. When are the wind and current most favorable in this situation?

- A. When they are crossing your course, both in the same direction
- B. When they are both parallel to the pier from ahead
- C. When they are crossing your course, in opposite directions to the other
- D. When they are both setting you on the pier

Correct answer: B

46. A ballasted vessel sinks enroute to a dry dock. Under these circumstances, the vessel's owner can claim which loss?

- A. Particular average
- B. General average
- C. Actual total loss
- D. Constructive total loss

Correct answer: C

47. What is the most useful drug to reduce a high fever?

- A. Paregoric
- B. Aspirin
- C. Aromatic spirits of ammonia
- D. Bicarbonate of soda

Correct answer: B

48. Which shallow water effect will increase dramatically if you increase your ship's speed past its "critical speed"?

- A. Sinkage
- B. Bank cushion
- C. Squatting
- D. Smelling the bottom

Correct answer: C

- 49.** You are 15 feet off a pier and docking a vessel using only a bow breast line and stern breast line. Once the slack is out of both lines you begin to haul in on the bow breast line. What is the effect on the vessel?
- A. The stern will come in and the bow will remain the same distance off the pier.
 - B. The bow will come in and the stern will go out.
 - C. The bow will come in and the stern will remain the same distance off the pier.
 - D. The bow and stern come in equally closer toward the pier.

Correct answer: C

- 50.** What is the period of validity of a Cargo Ship Safety Radio Certificate?
- A. 6 months
 - B. 12 months
 - C. 24 months
 - D. 60 months

Correct answer: D

- 51.** In all but the most severe cases, how should bleeding from a wound be controlled?
- A. Cooling the wound with ice
 - B. Applying direct pressure to the wound
 - C. Applying a tourniquet
 - D. Submerging the wound in lukewarm water

Correct answer: B

- 52.** Which term defines the total weight of a box containing cargo?
- A. Tare weight
 - B. Gross weight
 - C. Cargo weight
 - D. Net weight

Correct answer: B

- 53.** If you find a victim that is unconscious. What vital signs is an immediate threat to life?
- A. High fever
 - B. Broken limbs
 - C. Irregular breathing
 - D. Head injury

Correct answer: C

- 54.** How is the "off-load" release system on a survival craft designed to be activated?
- A. It will activate when there is a load on the cable
 - B. It will activate only when the engine is started
 - C. It will activate only when the doors are closed
 - D. It will activate when there is no load on the cable

Correct answer: D

55. You have steamed 726 miles at 17.5 knots, and consumed 138 tons of fuel. If you have 252 tons of usable fuel remaining, how far can you steam at 13.5 knots?

- A. 789 miles
- B. 1719 miles
- C. 1326 miles
- D. 2228 miles

Correct answer: D

56. An alien crewmember with a D-1 permit leaves the vessel in a U.S. port and fails to return. The first report you make should be to which organization?

- A. Immigration Service
- B. The local police
- C. OCMI
- D. Customs Service

Correct answer: A

57. What is the best indication of the loading of a diesel engine?

- A. Exhaust gas temperature
- B. Oil temperature
- C. Fuel consumption
- D. Manifold pressure

Correct answer: A

58. Which statement about the deck line is TRUE?

- A. On a vessel with a rounded stringer-sheer plate, the deck line is marked where the stringer plate turns down from the plane of the deck line.
- B. The top of the deck line is marked at the highest point of the freeboard deck, including camber, at the midships point.
- C. The deck edge is marked at the intersection of the freeboard deck with the side shell, at the lowest point of sheer, with the vessel at even trim.
- D. A vessel with wooden planks on a steel deck will have the deck line marked at the intersection of the upper line of the wood sheathing with the side shell.

Correct answer: D

59. Which agency deals with stowaways?

- A. Customs
- B. Public Health
- C. U.S.D.A.
- D. Immigration

Correct answer: D

- 60.** If the Master of a US-flag towing vessel replaces any crew member with a non-US citizen, he/she must ensure which of the following?
- A. The vessel is on a foreign voyage, outside US jurisdiction, and not operating above the US outer continental shelf
 - B. The replacement holds a credential equivalent in experience and training to a mariner holding US credentials
 - C. The replacement can communicate with other crew members to the extent required by regulations
 - D. All of the above

Correct answer: D

- 61.** SOLAS requires a lifesaving training manual be provided in each crew cabin or in which other location?
- A. In the recreation and messrooms
 - B. In the engineering control station
 - C. On the bridge
 - D. In the fire control room

Correct answer: A

- 62.** Why should a person being treated for shock be wrapped in warm coverings?
- A. To protect the person from injury during transportation
 - B. To preserve body heat
 - C. To avoid self-inflicted wounds caused by spastic movement
 - D. To increase body heat

Correct answer: B

- 63.** Which statement about the dangerous cargo manifest is FALSE?
- A. The manifest must be kept in a designated holder on or near the bridge.
 - B. The manifest must be made up by the carrier, agents, and any person designated for this purpose.
 - C. Shipments of hazardous and non-hazardous cargoes may be listed on the manifest if they are destined for the same consignee.
 - D. The hazard class of each cargo must be indicated.

Correct answer: C

- 64.** Your ship of 12,000 tons displacement has a center of gravity of 21.5 feet above the keel. You run aground and estimate the weight aground is 2500 tons. What would be the virtual rise in the center of gravity?
- A. 1.26 feet
 - B. 3.80 feet
 - C. 4.80 feet
 - D. 5.66 feet

Correct answer: D

65. What does blowing tubes accomplish?

- A. Cleans soot deposits from the inside of the stack
- B. Increases boiler efficiency
- C. Eliminates unburned fuel oil residues from the firebox
- D. Flushes away mineral deposits inside the water tubes

Correct answer: B

66. You have determined the maneuvering characteristics of your vessel by taking the radar ranges and bearings of an isolated light while making a turn. The results are listed in illustration D035DG. Based on this data what is the tactical diameter of the turning circle?

- A. 755 yards
- B. 780 yards
- C. 820 yards
- D. 880 yards

Correct answer: D

67. What is the operating principal of a flash type evaporator?

- A. Sea water is heated to boiling temperature under a vacuum.
- B. Heated sea water is injected into a vacuum chamber.
- C. Sea water is passed over heated plates in a thin film.
- D. Sea water is forced through a heated eductor.

Correct answer: B

68. On what type of pump would you find an impeller?

- A. Centrifugal
- B. Gear
- C. Vane
- D. Piston

Correct answer: A

69. What is NOT a requirement for a salvage claim?

- A. The salvors must save or attempt to save any life in peril.
- B. The property saved must be "maritime property."
- C. The salvage service must be voluntary.
- D. The property must be in peril.

Correct answer: A

70. For insurance purposes, which is a requirement for a general average act?

- A. It must be a successful venture
- B. There are no losses
- C. There must be no imminent peril
- D. All of the above

Correct answer: A

United States Coast Guard National Maritime Center



D035DG

| HEADING (TRUE) | BEARING (TRUE) | RANGE (YDS) | REMARKS |
|-------------------|-------------------|----------------|-----------------------------|
| 333° | | | INITIAL HEADING |
| 333° | 315° | 2125 | ON INITIAL COURSE |
| 333° | 310° | 1650 | LEFT FULL RUDDER ORDERED |
| 327° | 307° | 1475 | |
| 310° | 303° | 1250 | |
| 278° | 302° | 1050 | |
| 268° | 305° | 900 | |
| 236° | 318° | 750 | |
| 196° | 337° | 800 | |
| 157° | 344° | 1100 | |
| 113° | 340° | 1350 | |
| 079° | 332° | 1525 | |
| 050° | 324° | 1575 | |
| 022° | 318° | 1550 | |
| 343° | 308° | 1400 | RUDDER AMIDSHIPS |
| 333° | 302° | 1175 | STEADY ON 333° |

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