

## U.S.C.G. Merchant Marine Exam

Mate Less than 500-1600 Gross Registered Tons

Q391 Deck General - Safety

(Sample Examination)

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

1. Which spaces are required to be segregated from cargo tanks carrying grades A, B, C, or D cargoes?
- (A) Cofferdams
  - (B) Enclosed deck spaces
  - (C) Navigation spaces
  - (D) Pump rooms

*If choice C is selected set score to 1.*

2. Which term describes the distance a vessel moves parallel to the original course from the point where the rudder is put over to any point on the turning circle?
- (A) Pivoting point
  - (B) Transfer
  - (C) Drift angle
  - (D) Advance

*If choice D is selected set score to 1.*

3. What is a CORRECT reply to a pilot's request, "How's your head"?
- (A) "Checked"
  - (B) "Steady"
  - (C) "Eased to 10° rudder"
  - (D) "Passing 50°"

*If choice D is selected set score to 1.*

4. A deck-stowed 40-foot container is giving off smoke, and one end is discolored from heat. The cargo is valuable and easily damaged by water. You want to extinguish the fire without further damage if possible. What action should you take?
- (A) Flood the container with water and disregard any cargo damage as the fire threatens the entire vessel.
  - (B) Cool the exterior of the container with water and close all vents; then keep it cooled until it can be off-loaded.
  - (C) Connect a portable line from the ship's fixed system and discharge CO<sub>2</sub> into the container.
  - (D) Pierce the container and discharge 6 or more portable CO<sub>2</sub>'s then add more CO<sub>2</sub> hourly.

*If choice D is selected set score to 1.*

**5.** 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.*

**6.** Who completes the Declaration of Inspection before loading a tank vessel?

- (A) The U.S. Coast Guard
- (B) The person(s) designated in charge
- (C) The manager of the shore facility
- (D) The American Bureau of Shipping

*If choice B is selected set score to 1.*

**7.** 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.*

**8.** What causes a single-screw vessel going ahead to turn more rapidly to port?

- (A) Side force of the propeller
- (B) Suction current
- (C) Thrust
- (D) Discharge current of the propeller

*If choice A is selected set score to 1.*

**9.** What is the signal to guide vessels in distress, indicating, "This is the best place to land"?

- (A) Horizontal motion of a white flag
- (B) The letter K in Morse code given by light
- (C) Firing of a white star signal
- (D) The code flag S as a hoist

*If choice B is selected set score to 1.*

**10.** 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.*

**11.** When rendering assistance to personnel in the water a SAR helicopter utilizes a rescue sling for most extractions. In which case would the use of a litter be preferred?

- (A) When the person is suffering from hypothermia
- (B) When the person is suffering from fatigue
- (C) When the person is not trained in the use of the rescue sling
- (D) When the person has a pacemaker and static discharge is a concern

*If choice A is selected set score to 1.*

**12.** What is the placement requirement for the number or name of a tank barge?

- (A) It shall be carved on a wooden board and attached to the barge's hull
- (B) It shall be displayed in at least 4 different positions on the barge
- (C) It shall be displayed as close to the navigation lights as possible
- (D) Displayed at the highest point of the barge's hull such that it can be seen from either side

*If choice D is selected set score to 1.*

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

- (A) One pound of CO<sub>2</sub> per cubic foot of cargo space
- (B) The gross volume of the space in cubic feet divided by 30
- (C) One pound of CO<sub>2</sub> 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.*

**14.** Which item is a journal kept by the officer of the watch in which day to day happenings are recorded regarding the deck department?

- (A) The deck log
- (B) The Official Logbook
- (C) The bell book
- (D) A cargo record book

*If choice A is selected set score to 1.*

- 15.** According to the U.S. regulations, what must be agreed upon by the person-in-charge of transfer operations, both ashore and on the vessel?
- (A) The status of the oily water separator
  - (B) The identity of the product to be transferred
  - (C) The size of the slop tank required under 155.330
  - (D) Whether or not the transferring ship is a "Public Vessel of the United States"

*If choice B is selected set score to 1.*

- 16.** How long must the operator of each vessel engaged in a vessel-to-vessel oil transfer operation keep a signed copy of the declaration of inspection for?
- (A) 10 days
  - (B) 1 month
  - (C) 6 months
  - (D) 1 year

*If choice B is selected set score to 1.*

- 17.** Multiple factors will have an effect on your vessel when it is maneuvering in restricted waters. Which of the following factors is the combination of sinkage and trim of the vessel?
- (A) Heel
  - (B) Bank cushion
  - (C) Bank suction
  - (D) Squat

*If choice D is selected set score to 1.*

- 18.** Your vessel is preparing to proceed up a river. Which of the following is true concerning the handling of the vessel in shallow water?
- (A) The steering is sluggish in deep water as opposed to shallow water
  - (B) Steering will be more responsive in shallow water as opposed to deep water
  - (C) There will be no difference in the steering of the vessel
  - (D) Steering will be sluggish in shallow water as opposed to deep water

*If choice D is selected set score to 1.*

- 19.** According to U.S. regulations what is the maximum allowable working pressure (MAWP) for each hose assembly used for transferring oil?
- (A) At least 600 psi (4.14 MPa)
  - (B) At least four times the sum for the pressure of the relief valve setting
  - (C) More than the maximum pump pressure when a relief valve is not installed
  - (D) At least 1030 kPa gauge (approx. 150 psig)

*If choice D is selected set score to 1.*

**20.** Which statement is TRUE concerning the "flash point" of a substance?

- (A) It is the temperature at which a substance, when ignited, will continue to burn.
- (B) It is the temperature at which a substance will spontaneously ignite.
- (C) It is the temperature at which the released vapors will fall within the explosive range.
- (D) It is lower than the ignition temperature.

*If choice D is selected set score to 1.*

**21.** 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.*

**22.** Bulk cargo refers to which of the following statements?

- (A) A cargo which requires refrigeration during the passage
- (B) A cargo which is very dense in relation to its volume
- (C) A homogeneous cargo not enclosed in a container
- (D) A cargo which occupies a large volume of space on a vessel

*If choice C is selected set score to 1.*

**23.** You are making a sharp turn in a channel and using a buoy four points on the bow to gauge your rate of turn. If you observe the buoy moving forward relative to you, what should you do?

- (A) Decrease the rate of turn
- (B) Increase speed
- (C) Increase the rate of turn
- (D) Maintain a constant rate of turn

*If choice A is selected set score to 1.*

**24.** You suspect that a crewmember has fallen overboard during the night and immediately execute a Williamson turn. What is the primary advantage of this maneuver under these circumstances?

- (A) The turn enables you to reverse course in the shortest possible time.
- (B) You will be on a reciprocal course and nearly on the track-line run during the night.
- (C) You have extra time to maneuver in attempting to close in on the man for rescue.
- (D) The turn provides the maximum coverage of the area to be searched.

*If choice B is selected set score to 1.*

**25.** The operator of the ship's radiotelephone, if the radiotelephone is carried voluntarily, must hold at least which of the following?

- (A) A restricted radiotelephone operator permit
- (B) A mate's license
- (C) A seaman's document
- (D) A second-class radio operator's license

*If choice A is selected set score to 1.*

**26.** 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) You should attempt to submit an AMVER report to NSA.
- (B) You should only enter a port in the danger zone during hours of darkness.
- (C) If on a coastwise voyage along the east coast of the U.S., you should put into the nearest port.
- (D) When over 200 miles from a port in the danger zone, you should not darken ship.

*If choice A is selected set score to 1.*

**27.** You operate a harbor craft on inland waters exclusively. If you regularly service or contact foreign flag vessels in the course of business, which statement is TRUE?

- (A) Your crew must have identification credentials.
- (B) All contacts with a foreign flag vessel must be reported to the U.S. Coast Guard.
- (C) A customs official must be on board when contacting a foreign flag vessel.
- (D) Your vessel must be inspected.

*If choice A is selected set score to 1.*

**28.** Which is the primary element to successfully rescuing a man overboard?

- (A) Good communication
- (B) A dedicated crew
- (C) Good equipment
- (D) Well-conducted drills

*If choice D is selected set score to 1.*

**29.** You have taken another vessel in tow at sea. Which is an indicator that the towing speed is too fast?

- (A) The catenary comes clear of the water
- (B) The towed vessel goes "in irons"
- (C) The vessels are not in step
- (D) The tow line feels like it is "jumping" when touched

*If choice A is selected set score to 1.*

**30.** 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.*

**31.** 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.*

**32.** Which statement about tunnel bow thrusters fitted to large vessels is TRUE?

- (A) They are effective on most vessels at speeds up to 10 knots.
- (B) When going astern at slow speed, they provide effective steering control.
- (C) Because of their location, most modern installations have as much power as a tug.
- (D) They are fully effective at all drafts.

*If choice B is selected set score to 1.*

**33.** When oily ballast has been pumped overboard, an entry must be made in which log?

- (A) Official Logbook
- (B) Deck rough log
- (C) Engine rough log
- (D) Oil Record Book

*If choice D is selected set score to 1.*

**34.** An important step in fighting any electrical fire is to take which action?

- (A) Stop the vessel
- (B) De-energize the circuit
- (C) Stop ventilation
- (D) Apply water to extinguish the fire

*If choice B is selected set score to 1.*



**35.** 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.*

**36.** 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.*

**37.** Which type of portable fire extinguishers is NOT designed for use on flammable liquid fires?

- (A) Carbon dioxide
- (B) Water (cartridge-operated)
- (C) Foam (stored-pressure)
- (D) Dry chemical

*If choice B is selected set score to 1.*

**38.** If the situation arose where it became necessary to tow a disabled vessel, which statement is TRUE concerning the towing line?

- (A) The towing line should be taut at all times between the vessels.
- (B) There should be a catenary so the line dips into the water.
- (C) The towing line between the two vessels should be clear of the water.
- (D) None of the above.

*If choice B is selected set score to 1.*

**39.** How are fusible link fire dampers operated?

- (A) The heat of a fire melting the link
- (B) A break-glass and pull-cable system
- (C) Electrical controls on the bridge
- (D) A mechanical arm outside the vent duct

*If choice A is selected set score to 1.*

**40.** A fire starts on your vessel while refueling. Which action should you take FIRST?

- (A) Sound the general alarm
- (B) Attempt to extinguish the fire
- (C) Determine the source of the fire
- (D) Stop the ventilation

*If choice A is selected set score to 1.*

**41.** 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.*

**42.** You are conning a twin-screw vessel going ahead with rudders amidships. How will the vessel respond if the port screw stops turning?

- (A) The bow will go first to port and then to starboard
- (B) The vessel will not veer to either side
- (C) The bow will go to starboard
- (D) The bow will go to port

*If choice D is selected set score to 1.*

**43.** Which expresses the term leeway?

- (A) The momentum of a vessel after her engines have been stopped
- (B) The difference between the true course and the compass course
- (C) The lateral movement of a vessel downwind of her intended course
- (D) The displacement of a vessel multiplied by her speed

*If choice C is selected set score to 1.*

**44.** How should the number "9" be pronounced when spoken on the radiotelephone?

- (A) NUM-BER-NINE
- (B) NO-VAY-NINER
- (C) OK-TOH-NINE
- (D) NEW-MER-AL-NINER

*If choice B is selected set score to 1.*

**45.** 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.*

**46.** 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.*

**47.** 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.*

**48.** No outlet on a fire hydrant may point above the horizontal in order to \_\_\_\_\_.

- (A) prevent spray on electrical equipment
- (B) avoid kinking the hose
- (C) avoid personal injury during connection
- (D) make connecting easier

*If choice B is selected set score to 1.*

**49.** You are shifting a gas free tank barge to dry dock for repairs. The barge must have onboard which document?

- (A) A valid Certificate of Inspection
- (B) A Gas Free Certificate
- (C) A Permit to Proceed and Hot Work Permit
- (D) All of the above

*If choice A is selected set score to 1.*

**50.** 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 week
- (B) Once a month
- (C) Once a year
- (D) Twice a year

*If choice B is selected set score to 1.*

**51.** In relation to the turning circle of a ship, which describes the term "advance"?

- (A) The distance moved sidewise from the original course when the rudder is first put over
- (B) The distance gained at right angles to the original course
- (C) The distance gained in the direction of the original course
- (D) The distance around the circumference of the turning circle

*If choice C is selected set score to 1.*

**52.** 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.*

**53.** 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.*

**54.** "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.*

**55.** 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.*

**56.** 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.*

**57.** You have abandoned ship in rough weather. After picking up other survivors in your liferaft, what should you do next?

- (A) Prepare for the arrival of rescue units.
- (B) Top up the buoyancy tubes.
- (C) Decide on food and water rations.
- (D) Deploy the sea anchor

*If choice D is selected set score to 1.*

**58.** 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.*

**59.** 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.*

**60.** When collecting condensation for drinking water, which is TRUE?

- (A) A sponge used to mop up and store condensation must be kept salt free
- (B) It should be strained through a finely woven cloth
- (C) Only condensation on the bottom of the canopy should be collected
- (D) Chlorine tablets should be used to make it drinkable

*If choice A is selected set score to 1.*

**61.** To what chemical family does ethylene oxide belong?

- (A) Esters
- (B) Glycol ethers
- (C) Alkylene oxides
- (D) Alcohols

*If choice C is selected set score to 1.*

**62.** During a SAR helicopter evolution the rescue sling is the most widely used method of extraction. Which of the following describes the alternate Double Lift Method used to pick-up incapacitated persons?

- (A) A normal rescue sling and a seating belt manned by a helicopter crew member
- (B) A normal rescue sling and a rescue net used to simultaneously extract multiple personnel
- (C) Two normal rescue slings one manned by a helicopter crew member
- (D) A normal rescue sling and a rescue seat used to simultaneously extract multiple personnel

*If choice A is selected set score to 1.*

**63.** 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.*

**64.** 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.*

**65.** As a ship moves through the water, it drags with it a body of water called the wake. Which term defines the ratio of the wake speed to the ship's speed?

- (A) Speed of advance
- (B) Wake fraction
- (C) Wake distribution
- (D) Propeller velocity

*If choice B is selected set score to 1.*

**66.** 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.*

**67.** 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.*

**68.** An aluminum powder fire is in which fire classification category?

- (A) Class A
- (B) Class B
- (C) Class C
- (D) Class D

*If choice D is selected set score to 1.*

**69.** When is a lookout permitted to leave his station?

- (A) Only when properly relieved
- (B) At the end of the watch
- (C) 15 minutes before the end of the watch
- (D) At any time

*If choice A is selected set score to 1.*

**70.** The carbon dioxide cylinders of a fixed fire extinguishing system may be located inside the protected space, if the quantity of CO<sub>2</sub> required to protect that space is not more than \_\_\_\_\_.

- (A) 300 pounds
- (B) 400 pounds
- (C) 500 pounds
- (D) 600 pounds

*If choice A is selected set score to 1.*



## D030DG

