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. According to U.S. regulations, how many emergency outfits are required to be carried onboard all tankships over 1,000 gross tons?
   
   o (A) Three emergency outfits  
   o (B) Four emergency outfits  
   • (C) Two emergency outfits  
   o (D) One emergency outfit  
   
   *If choice C is selected set score to 1.*

2. Water pockets on the underside of an inflatable liferaft are for __________.  
   
   o (A) easy drainage  
   o (B) catching rain water  
   o (C) maneuverability  
   • (D) stability  
   
   *If choice D is selected set score to 1.*

3. Which item do you NOT have to provide for the Coast Guard representative at the time of a stability test?  
   
   o (A) Capacity plans showing the vertical and longitudinal centers of gravity of stowage spaces and tanks.  
   o (B) General arrangement plans of decks, holds and inner bottoms  
   • (C) A stability letter.  
   o (D) Tank sounding tables and draft mark locations.  
   
   *If choice C is selected set score to 1.*

4. Free communication effect is in direct proportion to __________.  
   
   • (A) length and width of space  
   o (B) width of space only  
   o (C) length of space only  
   o (D) neither length nor width  
   
   *If choice A is selected set score to 1.*
5. The regulations require that inspected vessels on an international voyage, other than small passenger vessels, must carry which of the following distress signals on or near the navigating bridge?

- (A) 12 rocket parachute flares
- (B) 12 hand red flares
- (C) 6 hand red flares, and 6 hand orange smoke signals
- (D) 12 hand combination flares and orange smoke signals

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

6. Which term is used to describe a generally circular low pressure area?

- (A) A cold front
- (B) An occluded front
- (C) A cyclone
- (D) An anticyclone

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

7. Which statement(s) is (are) TRUE concerning wire rope?

- (A) Wire rope should be condemned if the outside wires are worn to one-half their original diameter.
- (B) Wire rope which is right-hand laid should be coiled counterclockwise to prevent kinking.
- (C) Wire rope should be condemned if the fiber core appears moist.
- (D) All of the above

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

8. What is the function of wearing rings found on some centrifugal pumps?

- (A) Dampen the turbulent discharge flow
- (B) Isolate the outlet side from the inlet side
- (C) Absorb erosion of high-velocity discharge stream
- (D) Seal pump shaft against entry of air

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

9. Which describes Marline?

- (A) Two-stranded left-handed hemp cord
- (B) Four-stranded sisal line
- (C) Sail twine
- (D) Three-stranded cotton line

*If choice A is selected set score to 1.*
10. Which term describes Cargoes that might leak from containers?

- (A) Caustic cargoes
- (B) Dirty cargoes
- (C) Wet cargoes
- (D) Bulk cargoes

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

11. Static electricity may be built up by the __________.

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

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

12. When launching an open lifeboat by falls, which is TRUE concerning the boathooks?

- (A) They must be kept free to be used for fending off
- (B) They must be used for picking up survivors in the water
- (C) They must be secured amidships where they will not hinder the personnel
- (D) They must be secured forward and aft where readily available

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

13. Which is TRUE of an aneroid barometer?

- (A) An instrument used to measure the speed of wind
- (B) An instrument that is used to measure the height of waves
- (C) An instrument in which the pressure of the air is measured
- (D) An instrument that tells which direction a storm is coming from

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

14. What is the best splice for repairing a parted synthetic fiber mooring line?

- (A) Short splice
- (B) Long splice
- (C) Locking long splice
- (D) Liverpool splice

*If choice A is selected set score to 1.*
15. The National Oceanic and Atmospheric Administration publishes which item?
   
   - (A) Light Lists
   - (B) Sailing Directions
   - (C) Coast Pilots
   - (D) pilot charts

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

16. Under the Carriage of Goods by Sea Act of 1936, which of the following will make a vessel liable if there is damage to the cargo?
   
   - (A) Insufficient packing in containers
   - (B) Quarantine delays
   - (C) Mismanagement of the vessel
   - (D) Unseaworthiness when sailing

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

17. Which publication lists Class I and II private aids to navigation in or along navigable waters of the United States?
   
   - (A) Sailing Directions
   - (B) List of Private Aids
   - (C) Light List
   - (D) Aids to Navigation Manual

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

18. 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) Coast Pilot
   - (B) Light List
   - (C) On the chart
   - (D) Notice to Mariners

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

19. What is meant by the term "topping the boom"?
   
   - (A) Lowering the boom
   - (B) Swinging the boom athwartships
   - (C) Spotting the boom over the deck
   - (D) Raising the boom

   *If choice D is selected set score to 1.*
20. 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 being blown down
- (D) hoses are disconnected and being capped

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

21. The two factors which make underwater hull repair difficult are accessibility and which other factor?

- (A) The threat of progressive flooding
- (B) The shape of the hull
- (C) The availability of tools
- (D) The pressure exerted by the water

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

22. What are the type and number of hand portable fire extinguishers required outside and in the vicinity of the paint locker exit?

- (A) One A-I
- (B) Two A-IIs
- (C) One B-II
- (D) One C-II

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

23. The vessel's Emergency Position Indicating Radio beacon (EPIRB) must be tested at which time interval?

- (A) Every 2 months
- (B) Monthly
- (C) Every 3 months
- (D) Weekly

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

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

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

*If choice C is selected set score to 1.*
25. What is the approximate length of the painter of the inflatable liferaft?

   - (A) 25 feet
   - (B) 100 feet
   - (C) 200 feet
   - (D) 400 feet

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

26. Where must immersion suits be stowed?

   - (A) On top of lockers
   - (B) On open deck areas
   - (C) Only in the pilothouse
   - (D) Where they are readily accessible

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

27. Fog forms when the air temperature is at or below __________.

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

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

28. The order of importance in addressing damage control is __________.

   - (A) control fire, control flooding, repair structural damage
   - (B) restore vital services, control fire, control flooding
   - (C) control fire, restore vital services, control flooding
   - (D) control flooding, control fire, repair structural damage

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

29. Given a dry bulb temperature of 78°F and wet bulb temperature of 66.5°F, what is the dew point?

   - (A) 47.0°F
   - (B) 51.5°F
   - (C) 59.0°F
   - (D) 70.0°F

   *If choice C is selected set score to 1.*
30. What does a slow rise in the barometric pressure forecast?

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

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

31. 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 increases to the open tanks
- (C) The rate of flow stops to the open tanks
- (D) The rate of flow decreases to the open tanks

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

32. What is the name of a cloud of marked vertical development (often anvil-shaped) and produces showers?

- (A) Cirrocumulus
- (B) Cumulonimbus
- (C) Cirrus
- (D) Altocumulus

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

33. Which defines the standing part of a tackle?

- (A) The standing part of the tackle is all the fall except the hauling part
- (B) The standing part of the tackle is the hook that engages the weight to be moved
- (C) The standing part of the tackle is that part of the falls made fast to one of the blocks
- (D) The standing part of the tackle is that part to which power is applied

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

34. What type of gas detection device is used to determine when gassing up is complete?

- (A) Methane detector
- (B) Dew point meter
- (C) Oxygen meter
- (D) CO2 meter

*If choice C is selected set score to 1.*
35. How is the number of pounds of carbon dioxide required for each cargo space on a cargo vessel computed?
   - (A) The gross volume of the space in cubic feet divided by 100
   - (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) One pound of CO2 per cubic foot of cargo space

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

36. Which statement about the use of portable electric lights in petroleum product tanks is TRUE?
   - (A) The fixture must be explosion-proof and the line must have a ground wire.
   - (B) They must be explosion-proof, self-contained, battery-fed lamps.
   - (C) No portable electric equipment of any type is allowed.
   - (D) They can be used only when the compartment is gas free.

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

37. Which agency must approve the Safety equipment on board inspected vessels?
   - (A) The Safety Standards Bureau
   - (B) The U.S. Coast Guard
   - (C) The Occupational Safety and Health Administration (OSHA)
   - (D) The National Safety Council

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

38. The scuppers had been plugged as required at the time a small oil spill occurs on deck from a leaking dresser coupler. After shutting down the transfer, the engine room should first be informed and then which action should be taken?
   - (A) Remove the plugs from the scuppers
   - (B) Rig a fire hose to wash down the deck
   - (C) Spread an absorbent material, such as sawdust
   - (D) Sound the general alarm

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

39. The safe working load for the assembled cargo gear and the minimum angle to the horizontal for which the gear is designed shall be marked on the __________.
   - (A) deck
   - (B) head of the boom
   - (C) mast or king post
   - (D) heel of the boom

   *If choice D is selected set score to 1.*
40. What is the minimum number of fire pumps required on a cargo vessel of 900 GT?

- (A) 1
- (B) 2
- (C) 3
- (D) 4

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

41. Your vessel has 3 lifeboats on each side. The middle lifeboat on the port side is designated as which boat number?

- (A) 2
- (B) 2 PORT
- (C) 3
- (D) 4

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

42. By convention, the Earth's south magnetic pole is which color?

- (A) Black
- (B) Blue
- (C) White
- (D) Red

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

43. In illustration D039NG below, what type of cloud is indicated by the number one?

- (A) Nimbostratus
- (B) Altocumulus
- (C) Cirrus
- (D) Altostratus

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

44. The signal man assisting a crane operator has his arm extended, thumb pointing downwards, flexing fingers in and out. What does this signal mean?

- (A) To raise the load and lower the boom
- (B) To lower the load and raise the boom
- (C) To raise the boom and lower the load
- (D) To lower the boom and raise the load

*If choice D is selected set score to 1.*
45. An inflatable liferaft can be launched by __________.

- (A) throwing the entire container overboard and then pulling on the operating cord to inflate the raft
  - (B) removing the securing straps
  - (C) breaking the weak link on the painter
  - (D) the float-free method ONLY

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

46. When the dew point of the outside air is lower than or equal to the dew point of the air in the cargo hold, which is the BEST action to take?

- (A) Shut down the exhaust blowers
- (B) Ventilate the cargo holds
- (C) Secure all ventilation
- (D) Shut down the intake blowers

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

47. How is the external flotation bladder of an immersion suit inflated?

- (A) It is inflated by a small CO2 bottle that is automatically tripped when the front zipper is at the top of the zipper track.
- (B) It is inflated by a small CO2 bottle that is manually tripped.
- (C) It is inflated by blowing through an inflation tube.
- (D) It inflates by sea water bleeding into the flotation bladder and reacting with a chemical therein.

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

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

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

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

49. What is the proper first aid for LPG in the eye?

- (A) Keep the eyelid close.
- (B) Rub the eye area clean.
- (C) Flush the eye with plenty of water.
- (D) Apply an ice pack to the eye.

*If choice C is selected set score to 1.*
50. How much foam does an A B-III foam extinguisher contain?

- (A) 2-1/2 gallons of foam
- (B) 8 gallons of foam
- (C) 10 gallons of foam
- (D) 12 gallons of foam

*If choice D is selected set score to 1.*
Altitude (in feet)

26,000
24,000
22,000
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000

1
2
3
4
5
6
7
8
9

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