

U.S.C.G. Merchant Marine Exam

Master LT 100 GRT to Master or Mate LT 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. Number 3 lifeboat would be _____.
- (A) the forward boat on the starboard side
 - (B) behind boat number 2 on the port side
 - (C) behind boat number 1 on the starboard side
 - (D) behind boat number 1 on the port side

If choice C is selected set score to 1.

2. The breaking strength of the service lines of the rockets used with an impulse-projected, rocket type line throwing appliances is _____.
- (A) 300 lbs
 - (B) 500 lbs
 - (C) 1000 lbs
 - (D) 1500 lbs

If choice B is selected set score to 1.

3. Which action(s) is/are included in crane operations?
- (A) Removing booms from stowage
 - (B) Pre-operation checks and start-up
 - (C) Luff, slew, and hoist operations
 - (D) All of the above

If choice D is selected set score to 1.

4. The greatest effect on stability occurs from loose liquids flowing _____.
- (A) from fore to aft in the tanks of a vessel
 - (B) from side to side in the tanks of the vessel
 - (C) in and out of a vessel that is holed in a wing tank
 - (D) in and out of a vessel that is holed in a peak tank

If choice C is selected set score to 1.

5. Free communication will adversely affect transverse stability only when the flooded space is _____.
- (A) completely flooded
 - (B) open to the sea above and below the waterline
 - (C) off-center
 - (D) on the centerline

If choice C is selected set score to 1.

6. The boom indicator on a crane will indicate the _____.

- (A) lifting capacity of the boom
- (B) direction of the boom
- (C) length of the boom
- (D) angle of the boom

If choice D is selected set score to 1.

7. What does a pyrometer measure on a diesel engine?

- (A) Exhaust temperature
- (B) Air box pressure
- (C) Water pressure
- (D) Water temperature

If choice A is selected set score to 1.

8. A petroleum liquid has a flash point of 85°F. This is a grade _____.

- (A) B flammable liquid
- (B) C flammable liquid
- (C) D combustible liquid
- (D) E combustible liquid

If choice C is selected set score to 1.

9. A vessel at LAT 32°14.7'N, LONG 66°28.9'W, heads for a destination at LAT 36°58.7'N, LONG 75°42.2'W. Determine the distance by Mercator sailing.

- (A) 300.2° miles
- (B) 538.2° miles
- (C) 241.2° miles
- (D) 270.2° miles

If choice B is selected set score to 1.

10. Progressive flooding is controlled by securing watertight boundaries and _____.

- (A) transferring water ballast
- (B) abandoning ship
- (C) pumping out flooded compartments
- (D) jettisoning cargo

If choice C is selected set score to 1.

11. A system of reservoirs and connecting tubes in a gyro compass is called a _____.

- (A) gyrotron
- (B) mercury ballistic
- (C) rotor
- (D) spider element

If choice B is selected set score to 1.

12. The directive force of a gyrocompass _____.

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

If choice C is selected set score to 1.

13. At 2237 ZT on 14 July you are in DR position LAT 33°57' N, LONG 150°32' W, when you observe an amplitude of Saturn. The planet is about one Sun's diameter above the visible horizon and bears 258.6°psc. The variation is 14°E. What is the deviation?

- (A) 1.0°E
- (B) 1.0°W
- (C) 2.0°W
- (D) 0.0°

If choice C is selected set score to 1.

14. Transverse frames are more widely spaced on a ship that is designed with the _____.

- (A) longitudinal system of framing
- (B) transverse system of framing
- (C) isometric system of framing
- (D) centerline system of framing

If choice A is selected set score to 1.

15. How many low-velocity spray applicators are required on the weather decks of a tankship?

- (A) One
- (B) Two
- (C) Three
- (D) Four

If choice D is selected set score to 1.

16. On September 9 your 2130 zone time (ZD +5) DR position is LAT 45°08'N, LONG 82°38'W. At that time, you observe Polaris bearing 000.5°pgc. The chronometer time of the observation is 02h 26m 09s, and the chronometer is 1m 43s slow. The variation is 8.7°W. What is the gyro error?

- (A) 9.4°W
- (B) 1.2°E
- (C) 0.7°E
- (D) 0.8°W

If choice C is selected set score to 1.

17. Which is NOT an advantage of the flush method of welded shell plating?

- (A) Reduces weight
- (B) Reduces plate stress
- (C) Keeps practically 100% of tensile strength at the joints
- (D) Reduces frictional resistance

If choice B is selected set score to 1.

18. The ceiling is _____.

- (A) a wooden protection placed over the tank top
- (B) material driven into seams or cracks to prevent leaking
- (C) the overhead in berthing compartments
- (D) None of the above are correct

If choice A is selected set score to 1.

19. The wooden planking that protects the tank top from cargo loading is called _____.

- (A) toms
- (B) ceiling
- (C) frames
- (D) shores

If choice B is selected set score to 1.

20. The order of importance in addressing damage control is _____.

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

If choice C is selected set score to 1.

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

- (A) approximately one-third of the way up the bulkhead
- (B) approximately halfway up the bulkhead
- (C) evenly over the surface of the bulkhead
- (D) at the bottom of the bulkhead

If choice A is selected set score to 1.

22. All diesel engines are classified as _____.

- (A) vacuum ignition
- (B) external combustion
- (C) four cycle
- (D) compression ignition

If choice D is selected set score to 1.

23. What is the purpose of a striker plate?

- (A) Absorbs machinery vibration
- (B) Provides surface for applying force on machinery
- (C) Prevents valve stem over-travel
- (D) Provides landing surface for the sounding bob

If choice D is selected set score to 1.

24. If you are loading fruit in reefer spaces and you notice that the fruit is beginning to mold, you should _____.

- (A) carry the cargo at a cooler temperature than originally planned
- (B) discharge CO₂ into the compartment after loading
- (C) refuse to carry the cargo
- (D) write up exceptions on the cargo

If choice D is selected set score to 1.

25. The quickest method to stop a small diesel engine whose throttle or governor has become stuck open is to _____.

- (A) drain the fuel tank
- (B) turn off the ignition switch
- (C) apply the shaft brake
- (D) close the fuel supply valve

If choice D is selected set score to 1.

26. The brickwork surrounding the firebox of a boiler is known as _____.

- (A) the water wall
- (B) refractory
- (C) the screen wall
- (D) fire plate

If choice B is selected set score to 1.

27. In a water-tube marine type boiler, after the steam leaves the generating tubes, in what part of the boiler is temperature of the steam increased?

- (A) Superheater
- (B) Economizer
- (C) Mud drum
- (D) Firebox

If choice A is selected set score to 1.

28. Diesel engines obtain combustion air through turbo chargers, blowers, or _____.

- (A) carburetors
- (B) air receivers
- (C) natural aspiration
- (D) air starters

If choice C is selected set score to 1.

29. The Master shall insure that the Emergency Position Indicating Radio beacon (EPIRB) is _____.

- (A) tested monthly
- (B) secured in the emergency locker
- (C) tested annually
- (D) secured inside the wheelhouse

If choice A is selected set score to 1.

30. Maritime Administration personnel may be allowed in the pilothouse upon the responsibility of the _____.

- (A) officer in charge of the watch
- (B) Navigator
- (C) Chief Officer
- (D) most senior person present from the Maritime Administration

If choice A is selected set score to 1.

31. When fruit is carried as refrigerated cargo, the most frequent cause of its being infected at the discharge port is _____.

- (A) carriage at the wrong temperature
- (B) improper cleaning of the cargo spaces
- (C) improper precooling of the cargo spaces
- (D) leaks in the ship's refrigeration system

If choice B is selected set score to 1.

32. The wire rope used for cargo handling on board your vessel has a safe working load of eight tons. It shall be able to withstand a breaking test load of _____.

- (A) 32 tons
- (B) 40 tons
- (C) 48 tons
- (D) 64 tons

If choice B is selected set score to 1.

33. You have berthed in a port area with other tank vessels. What signal is displayed by a vessel to indicate it is transferring flammable or combustible liquid cargo?

- (A) A red light visible all around the horizon
- (B) An illuminated red and yellow caution flag
- (C) A green light visible all around the horizon
- (D) A flashing yellow light

If choice A is selected set score to 1.

34. Portable fire extinguishers must be provided for the cargo tank area of an unmanned tank barge _____.

- (A) only when fully loaded
- (B) when transferring cargo
- (C) if one or more tanks are full
- (D) only when the barge is being towed

If choice B is selected set score to 1.

35. In reference to accidental oil pollution, the most critical time during bunkering is when _____.

- (A) final topping off is occurring
- (B) hoses are being disconnected
- (C) you first start to receive fuel
- (D) hoses are being blown down

If choice A is selected set score to 1.

36. A precaution you should take before bunkering is to _____.

- (A) plug the sounding pipes
- (B) plug the scuppers
- (C) close the lids on the vents
- (D) plug the vents

If choice B is selected set score to 1.

37. Petroleum cargo tanks should not be topped off at deck level when loading on a cold day due to which of the following?

- (A) air pockets may cause the cargo to bubble out of the ullage hole
- (B) the tank valve may be stiff and a spill will occur before the valve can be closed
- (C) the increased viscosity of the product requires higher loading pressure which increases the chances of a spill
- (D) a subsequent temperature rise will cause the cargo to overflow

If choice D is selected set score to 1.

38. When loading a tanker, you should _____.

- (A) keep the seamen on watch on standby in the mess room
- (B) keep a strain on the loading hoses
- (C) close valves by closing them down, reopening one or two turns, and re-closing
- (D) load only one tank at a time

If choice C is selected set score to 1.

39. A B-II fire extinguisher has a minimum capacity of _____.

- (A) 3 gallons of foam
- (B) 20 pounds of CO₂
- (C) 10 pounds of dry chemical
- (D) All of the above

If choice C is selected set score to 1.

40. You have determined that a cargo space on a freight vessel is 45 feet by 36 feet by 62 feet. How many pounds of carbon dioxide is required for this space?

- (A) 1674
- (B) 2511
- (C) 3348
- (D) 5022

If choice C is selected set score to 1.

41. What is the minimum number of fire pumps required on a cargo vessel of 2,000 GT?

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

If choice B is selected set score to 1.

42. On an inspected vessel, which abbreviation refers to the horizontal distance between perpendiculars taken at the forward-most and the after-most points on the waterline at her deepest operating draft?

- (A) LLL
- (B) LBP
- (C) LWL
- (D) LOA

If choice B is selected set score to 1.

43. The trim and stability booklet must be approved by the _____.

- (A) International Maritime Organization
- (B) National Cargo Bureau
- (C) Society of Naval Architects and Marine Engineers
- (D) United States Coast Guard

If choice D is selected set score to 1.

44. Inflatable liferafts shall be serviced at an approved servicing facility every 12 months or not later than the next vessel inspection for certification. However, the total elapsed time between servicing cannot exceed _____.

- (A) 12 months
- (B) 15 months
- (C) 17 months
- (D) 18 months

If choice C is selected set score to 1.

45. If you reach shore in a liferaft, the first thing to do is _____.

- (A) set the raft back out to sea so someone may spot it
- (B) drag the raft ashore and lash it down for a shelter
- (C) find some wood for a fire
- (D) get the provisions out of the raft

If choice B is selected set score to 1.

46. What size bilge pump is required for a lifeboat which has a capacity of 675 cubic feet?

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

If choice B is selected set score to 1.

47. An emergency sea anchor may be constructed by using _____.

- (A) a boat bucket
- (B) an air tank filled with water
- (C) an oar and canvas weighted down
- (D) All of the above

If choice D is selected set score to 1.

48. What could be a result of insufficient lubrication of lifeboat winches and davits?

- (A) Corroding of sheaves on the davits so they will not rotate
- (B) Moisture accumulation in winch motor damaging the electrical wiring
- (C) Freezing of gears in cold weather
- (D) All of the above

If choice D is selected set score to 1.

49. What is placed on the underside of an inflatable liferaft to help prevent it from being skidded by the wind or overturned?

- (A) Strikes
- (B) Sea anchor
- (C) A keel
- (D) Ballast bags

If choice D is selected set score to 1.

50. To disengage a survival craft suspended from the cable above the water, you must pull the safety pin and _____.

- (A) pull the hook release handle and use the ratchet bar
- (B) pull the hook release handle
- (C) use the ratchet bar and depress the retainer
- (D) pull the hook release handle and depress the retainer

If choice A is selected set score to 1.