

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

OUPV to Master Less than 100 Gross Registered Tons  
Great Lakes and Inland

Q352 Navigation and Deck General Safety

(Sample Examination)

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

1. What is the name of tackle number 1 as shown in illustration D029DG below?

- A. Gun tackle
- B. Single Whip
- C. One-fold purchase
- D. Runner

Correct answer: B

2. Which is the proper name given to a block that can be opened at the hook or shackle end to receive a bight of the line?

- A. Heel block
- B. Bight block
- C. Gin block
- D. Snatch block

Correct answer: D

3. What size block shell should be used with a 4-inch manila line?

- A. 8"
- B. 12"
- C. 16"
- D. 24"

Correct answer: B

4. What causes deviation in a magnetic compass?

- A. A nearby magnetic land mass or mineral deposits
- B. The magnetic influence inherent to that particular vessel
- C. The changes in the earth's magnetic field
- D. The magnetic lines of force not coinciding with the lines of longitude

Correct answer: B

5. Which of the following describes the difference between true heading and magnetic heading?

- A. Northerly error
- B. Variation
- C. Deviation
- D. Compass error

Correct answer: B

6. As a vessel changes course to starboard, which is TRUE concerning the compass card in a magnetic compass?
- A. It first turns to starboard then counterclockwise to port
  - B. The card remains aligned with compass north
  - C. The card turns counterclockwise to port
  - D. The card also turns to starboard

Correct answer: B

7. What is an advantage of the magnetic compass aboard vessels?
- A. It does not have to be checked as often.
  - B. It is reliable due to its essential simplicity.
  - C. All points on the compass rose are readily visible.
  - D. Compass error is negligible at or near the earth's magnetic poles.

Correct answer: B

8. Which is the BEST action to take if your vessel is dragging her anchor in a strong wind?
- A. Put over a stern anchor
  - B. Increase the scope of anchor cable
  - C. Shorten the scope of anchor cable
  - D. Put over the sea anchor

Correct answer: B

9. Your vessel is anchored in an open roadstead with three shots of chain out on the port anchor. The wind freshens considerably, and the anchor begins to drag. Which action should you take FIRST?
- A. Drop the starboard anchor short with about one shot of chain.
  - B. Veer out more chain on the port anchor.
  - C. Sheer out to starboard using the rudder, then drop the starboard anchor with about four shots of chain.
  - D. Put the engines slow ahead to help the anchor.

Correct answer: B

10. What is a major consideration when determining the scope of anchor line to pay out when anchoring a small boat?
- A. The depth of water, including tidal differences
  - B. The type of anchor being used
  - C. The charted depth of water only
  - D. The type of line being used for the anchor rope

Correct answer: A

11. The holding power of an anchor at a given scope of cable increases when which occurs?

- A. The shank is at a 50 degree angle
- B. The amount of chain lying along the bottom increases
- C. The length of the catenary is reduced
- D. The amount of chain lying along the bottom decreases

Correct answer: B

12. Freeing ports on a vessel with solid bulwarks accomplish which task?

- A. Permit easy jettison of deck cargo in an emergency
- B. Allow water shipped on deck to flow off rapidly
- C. Prevent stress concentration in the bulwark
- D. Provide openings through the bulwarks for mooring lines

Correct answer: B

13. Why are deck beams cambered on a vessel?

- A. To relieve deck stress
- B. To increase their strength
- C. To provide drainage from the decks
- D. To allow for welding expansion

Correct answer: C

14. What name is given to the perforated, elevated bottom of the chain locker, which prevents the chains from touching the main locker bottom and allows seepage water to flow to the drains?

- A. Manger
- B. Harping
- C. Cradle
- D. Draft

Correct answer: A

15. What is the name given to the distance between the waterline of a vessel and the main continuous deck of a vessel?

- A. The camber
- B. The freeboard
- C. The draft
- D. Buoyancy

Correct answer: B

16. Which term indicates how many tons of cargo a vessel can carry?

- A. Gross tonnage
- B. Deadweight
- C. Loaded displacement
- D. Bale cubic

Correct answer: B

17. The water in which a vessel floats provides vertical upward support. Which term is regarded as the point through which this support is assumed to act?
- A. The center of buoyancy
  - B. The center of effort
  - C. The center of flotation
  - D. The center of gravity

Correct answer: A

18. On a vessel, which information can be obtained by multiplying a load's weight by the distance of the load's center of gravity above the baseline?
- A. Inclining moment
  - B. Transverse moment
  - C. Vertical moment
  - D. Righting moment

Correct answer: C

19. The effect of free surface on initial stability depends upon which item(s)?
- A. The vertical position of the liquid in the vessel
  - B. The dimensions of the liquid surface and the vessel's displacement
  - C. Only the length of the compartment
  - D. The amount of liquid in the compartment

Correct answer: B

20. Assuming an even transverse distribution of weight in a vessel, which condition could cause a list?
- A. Flooding the forepeak to correct the vessel's trim
  - B. Having KG smaller than KM
  - C. Having a small positive righting arm
  - D. Empty double bottoms and lower holds, and a heavy deck cargo

Correct answer: D

21. What is Metacentric height a measure of?
- A. Initial stability only
  - B. Stability through all angles
  - C. Maximum righting arm
  - D. Location of G above the keel

Correct answer: A

22. For small angles of inclination, if the KG were equal to the KM, which is TRUE concerning the vessel?
- A. The vessel possesses negative stability
  - B. The vessel possesses maximum stability
  - C. The vessel possesses positive stability
  - D. The vessel possesses neutral stability

Correct answer: D

23. When a wind force causes a vessel to heel to a static angle, the \_\_\_\_\_.

- A. center of buoyancy remains the same
- B. centers of buoyancy and gravity are in the same vertical line
- C. righting moment equals the wind-heeling moment
- D. deck-edge immersion occurs

Correct answer: C

24. Which of the following defines "Rolling Period"?

- A. The time it takes the vessel to make a complete roll such as from port to starboard and back to port
- B. The time it takes the vessel to make a complete roll such as from port and return to level
- C. The time it takes the vessel to make a complete roll such as from port to starboard and return to level
- D. The time it takes the vessel to make a complete roll such as from level to starboard and return to port

Correct answer: A

25. Aboard a vessel, what does dividing the sum of the longitudinal moments by the total weight yield?

- A. The righting moments
- B. The vertical moments
- C. The vessel's LCG
- D. The inclining moments

Correct answer: C

26. What shall be conducted during a fire and boat drill?

- A. All watertight doors in the vicinity of the drill shall be operated.
- B. All lifeboat equipment shall be examined.
- C. Fire pumps shall be started and all exterior outlets opened.
- D. All of the above

Correct answer: A

27. What is the danger to personnel associated with using carbon dioxide in an enclosed space?

- A. An explosive reaction
- B. Frostbite
- C. Skin burns
- D. Asphyxiation

Correct answer: D

28. Foam extinguishes a fire mainly by \_\_\_\_\_.

- A. cooling
- B. inerting the air
- C. smothering
- D. chemical action

Correct answer: C

29. Why is carbon dioxide (CO<sub>2</sub>) better than dry chemical for fighting a class "C" fire?

- A. The dry chemical leaves a residue.
- B. The dry chemical is a conductor.
- C. CO<sub>2</sub> will not dissipate in air.
- D. It takes smaller amounts of CO<sub>2</sub> to cover the same area.

Correct answer: A

30. Which action is routinely performed at the annual servicing and inspection of a dry chemical cartridge-operated portable fire extinguisher?

- A. Inspect and weigh the cartridge.
- B. Test the pressure gauge for correct reading.
- C. Pressure test the discharge hose.
- D. Replace the dry chemical.

Correct answer: A

31. Which extinguishing agent is most effective on a mattress fire?

- A. CO<sub>2</sub>
- B. Water
- C. Halon
- D. Dry Chemical

Correct answer: B

32. Which statement is TRUE concerning the number of portable fire extinguishers required at the operating station of a small passenger vessel? (small passenger vessel regulations)

- A. None are required.
- B. One B-I or post 2017 One 10-B:C extinguisher is required
- C. One B-II or post 2017 One 40-B:C extinguisher is required
- D. Two B-I or post 2017 Two 10-B:C extinguishers are required

Correct answer: B

33. How many portable fire extinguishers are required for the machinery space of a small passenger vessel less than 100 GRT?

- A. None are required
- B. One B-I, C-I or post 2017 one 10-B:C extinguisher
- C. One B-II, C-II or post 2017 one 40-B:C extinguisher
- D. One B-II or post 2017 40-B extinguisher

Correct answer: C

34. According to 46 CFR Subchapter T the definition of a ferry includes which vessels?

- A. Vessels that provide transportation only between places that are not more than 300 miles apart
- B. Vessels used on a regular schedule
- C. Vessels that transport only Passengers Vehicles, or railroad cars
- D. All of the above

Correct answer: D

35. Which circumstance concerning an inspected passenger vessel would require knowledge and approval of the Officer in Charge, Marine Inspection? (small passenger vessel regulations)
- A. The removal of a watertight bulkhead
  - B. Renewal of an FCC Certificate for a radiotelephone
  - C. Minor maintenance of the propulsion machinery
  - D. All of the above

Correct answer: A

36. A vessels Certificate of Inspection will show which information? (small passenger vessel regulations)
- A. The route permitted
  - B. The minimum firefighting and lifesaving equipment
  - C. The crew requirements
  - D. All of the above

Correct answer: D

37. Which statement is TRUE concerning small passenger vessels bunks installed in overnight passenger accommodation spaces?
- A. must not be located more than 3 high, fitted with a suitable aid to access bunks more than 5' above deck with suitable aids to access bunks more than 5' above deck
  - B. must be immediately adjacent to an aisle leading to a means of escape
  - C. must be no less than 74" long and 24" wide with 24" of clear space above
  - D. All of the above

Correct answer: D

38. Which is TRUE concerning fixed ballast, on small passenger vessels?
- A. Only moved under the supervision of the owner, Master or shipyard
  - B. Discharged or moved at any time
  - C. Moved under any condition except extreme emergency
  - D. Moved temporarily for examination or repair of the vessel, when done under the supervision of an inspector

Correct answer: D

39. What is correct with respect to required watertight bulkheads on small passenger vessels less than 100 GT?
- A. Each bulkhead must be stepped at its midpoint.
  - B. Sluice valves are not permitted.
  - C. Penetrations are prohibited.
  - D. All of the above

Correct answer: B



40. On a small passenger vessel, if an inlet or discharge pipe is not accessible, which is a requirement of the shut off valve?
- A. Be operable from any accessible location above the bulkhead deck
  - B. Must be operable from the weather deck
  - C. Be labeled at its operating point to show its identity and direction of closing
  - D. All of the above

Correct answer: D

41. Which is a requirement of life jackets on all vessels?
- A. Readily available
  - B. Tested yearly
  - C. Inspected weekly
  - D. Worn at all times

Correct answer: A

42. Which is a requirement for each small passenger vessel that operates on the high seas, or beyond 3 miles from the coastline of the Great Lakes having a Category 1 406 MHz EPIRB?
- A. The EPIRB is in good operating condition and is stowed near its charger
  - B. The EPIRB will float free and clear of a sinking vessel and automatically activate
  - C. The EPIRB is protected against all physical hazards
  - D. All of the above

Correct answer: B

43. Aboard small passenger vessels which type(s) of ventilation must be provided for enclosed spaces containing gasoline engines or gasoline fuel tanks?
- A. Mechanical supply and natural exhaust
  - B. At least one opening to the exterior of the hull
  - C. Natural supply and mechanical exhaust
  - D. All of the above

Correct answer: C

44. On small passenger vessels how many supply and exhaust ducts are required in each enclosed space containing gasoline powered machinery or gasoline fuel tanks?
- A. 4 of each
  - B. 3 of each
  - C. 2 of each
  - D. 1 of each

Correct answer: C

45. Why do spaces containing batteries require good ventilation?

- A. Ventilation avoids CO<sub>2</sub> buildup
- B. Ventilation avoids flammable gas accumulation
- C. Ventilation supplies extra oxygen for the battery
- D. Less water would be used with ventilation

Correct answer: B

46. Which is a requirement for electrical wiring on all "T-Boats"?

- A. Wiring must be concealed so the boat can be maintained more easily
- B. Wiring must be concealed to prevent mechanical damage
- C. Wiring must be protected from the weather
- D. Wiring must be in an accessible place behind the ceiling

Correct answer: C

47. When shall the Master of a small passenger vessel conduct sufficient drills and give sufficient instruction?

- A. Once every month weather permitting
- B. At each crew change if new hires are reporting aboard for the first time
- C. Every week without fail
- D. Frequent enough to ensure that all crew members are familiar with their duties during emergencies

Correct answer: D

48. Who shall test every small passenger vessel's steering gear prior to getting underway for the day's operations?

- A. A credential Engineer
- B. A Mate or Designated Duty Engineer
- C. The Mate on watch
- D. The Master

Correct answer: D

49. The strictest load line regulations apply to which type of vessel?

- A. Tankers
- B. Passenger ships
- C. Gas carriers
- D. Freighters (break-bulk)

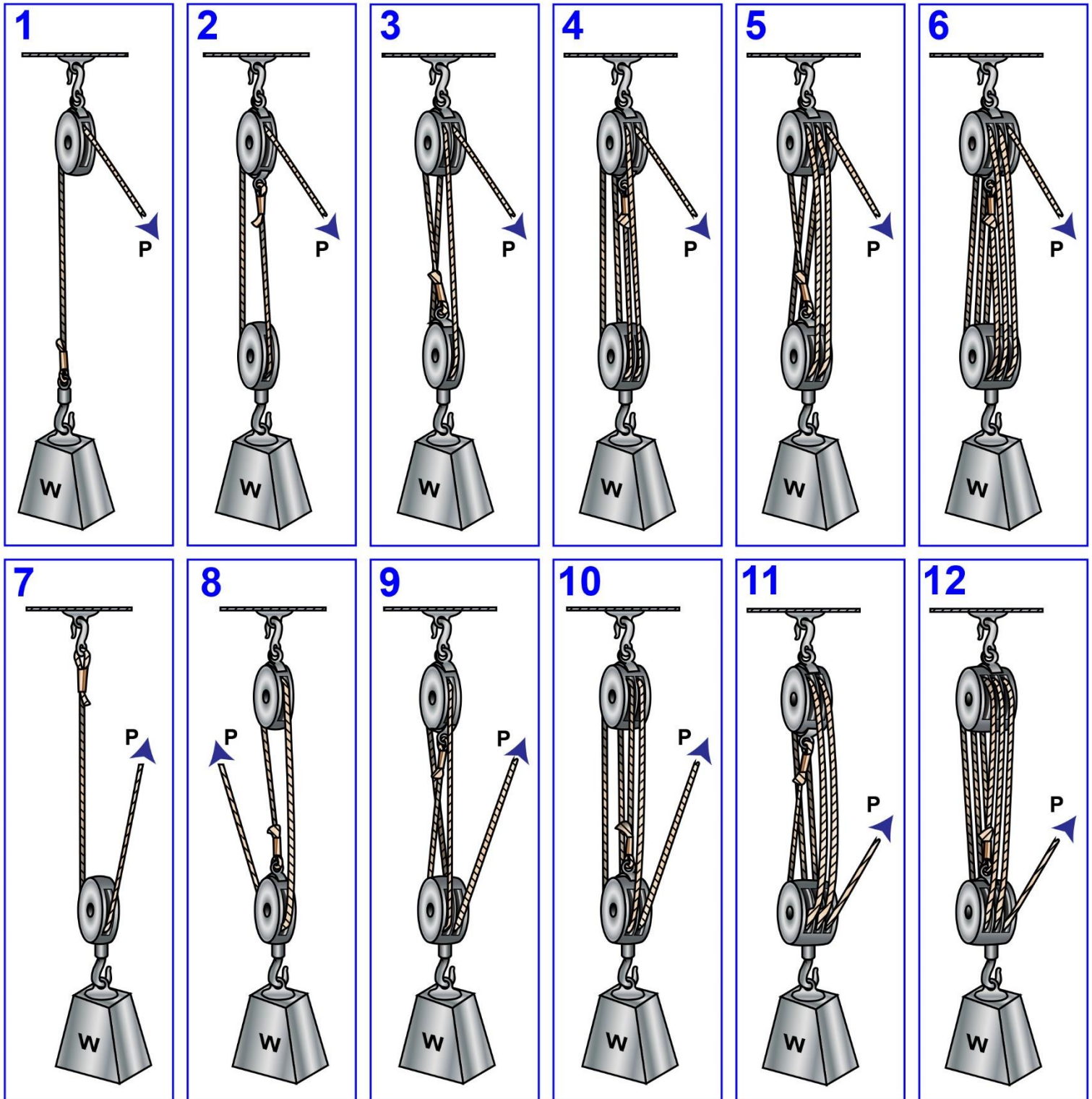
Correct answer: B

50. Which item indicates the maximum draft to which a vessel can legally be submerged?

- A. The tonnage mark
- B. The load line mark
- C. The Muster List ("Station Bill")
- D. The Net Tonnage Certificate

Correct answer: B

## D029DG



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