

U.S.C.G. Merchant Marine Exam

Apprentice Mate Steersman

Q418 Deck General

(Sample Examination)

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

1. Which document lists all the lifesaving equipment required for a vessel?

- A. International Convention for the Safety of Life at Sea Certificate
- B. Certificate of Registry
- C. American Bureau of Shipping Classification Certificate
- D. Certificate of Inspection

Correct answer: D

2. In illustration D024DG below, what is the purpose of item "G"?

- A. To distribute the vessel's thrust over a wider area
- B. To prevent the towboat from capsizing if item I should part
- C. To prevent the knee from shifting when the rudder is put hard over
- D. To keep the barges from shifting fore and aft

Correct answer: C

3. Which structural members improve a towing vessel's chance of surviving punctured shell plating?

- A. The rake
- B. Transverse watertight bulkheads
- C. Stringers
- D. Longitudinals

Correct answer: B

4. Which document is used to indicate suspected cargo damage caused by rough weather?

- A. The hull damage report
- B. The Master's Note of Protest
- C. The Unseaworthy Certificate
- D. The cargo report

Correct answer: B

5. What is the purpose of chafing gear?

- A. It protects fiber rope from abrasion
- B. It can pick up heavy loads
- C. It strengthens mooring lines
- D. It is used to anchor the boat

Correct answer: A

6. If you observe any situation which presents a safety or pollution hazard during fuel transfer operations, what action should you take FIRST?

- A. Shut down the transfer operation
- B. Close the valves at the transfer manifold
- C. Sound the fire alarm
- D. Notify the person in charge of the shore facility

Correct answer: A

7. Which statement about general average is TRUE?

- A. Of the ship, the freight, and the cargo interests, only one need be involved.
- B. Damage to a ship must have been incurred while the ship and/or its machinery was being used for its intended purpose.
- C. Property must have been sacrificed or an expenditure of money incurred.
- D. The loss or damage to deck cargo due to heavy weather constitutes general average.

Correct answer: C

8. How do the height and location of a tug's towing bitts relate to the danger of tripping?

- A. The height and position of towing bitts has no significance.
- B. Installing the bitts down low lowers the center of gravity.
- C. Placement further aft permits more effective pulling, better steering and eliminates the danger of tripping.
- D. The further forward and closer to amidships the more readily the tug will trip.

Correct answer: D

9. A mariner whose credential has been revoked shall not be issued another credential without which of the following?

- A. Approval of the Officer-in-Charge, Marine Inspection
- B. Approval of the Commandant
- C. Approval of an administrative law judge
- D. Taking a new examination

Correct answer: B

10. According to U.S. regulations, how often are you required to test cargo discharge piping?

- A. 6 months
- B. 12 months
- C. 18 months
- D. 24 months

Correct answer: B

11. Corrosive liquids and acids should have what kind of label?

- A. Red and White
- B. Skull and crossbones
- C. Yellow
- D. White and Black

Correct answer: D

12. Which statement about stopping a vessel is TRUE?

- A. A lightly laden vessel requires as much stopping distance as a fully laden vessel when the current is from astern.
- B. A tunnel bow thruster can be used in an emergency to reduce the stopping distance.
- C. Using ship's engine astern is the easiest way to stop.
- D. Putting a rudder hard over is the easiest way to stop a vessel.

Correct answer: C

13. What will NOT be found on the Certificate of Inspection of an oceangoing tankship?

- A. Grade(s) of cargoes that the vessel may carry
- B. Minimum freeboard permitted
- C. Manning requirements
- D. Waters upon which the vessel may be operated

Correct answer: B

14. You are the Chief Mate of a 30,000-DWT tankship. The vessel is engaged in trade with another country signatory to MARPOL 73/78. Which statement is TRUE?

- A. The Certificate of Inspection serves as prima facie evidence of complying with MARPOL 73/78
- B. An IOPP Certificate is renewed at each inspection for certification
- C. The IOPP Certificate for an inspected vessel is valid for 5 years
- D. An IOPP Certificate is invalidated if the ship carries multiple classes of cargoes

Correct answer: C

15. What does "Hanging a barge off" refer to?

- A. Mooring a barge to the bank and leaving it there
- B. To remove a barge while locking through
- C. Towing an empty barge astern
- D. To remove and deliver a loaded barge from a multiple tow

Correct answer: A

16. When instructing a crew member concerning the right way to lift a weight, how should you instruct him/her?

- A. Bend his knees and lift with his legs
- B. Bend his back and stoop with arms straight
- C. Arch the back to add strength to the muscles
- D. Bend his back and stoop

Correct answer: A

17. When stowing hazardous materials on deck, lashing of such cargo is permitted if _____.

- A. there is at least 3 inches of dunnage on deck
- B. the cargo is lashed to the adjacent guard rails
- C. the lashings are secured to deck pad eyes
- D. a wooden bin is constructed of at least 2-inch dunnage and bolted together

Correct answer: C

18. A maritime lien may be placed against which item(s)?

- A. Objects that are fixed and immovable, such as wharves
- B. The vessel only
- C. The vessel, cargo, or freight
- D. Any assets that a ship's owner may have

Correct answer: C

19. What is the name of the mark indicated by the letter A in illustration D003DG below?

- A. Fresh Water load line
- B. Deck line
- C. Plimsoll line
- D. Winter North Atlantic load line

Correct answer: B

20. 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. Propeller velocity
- B. Wake distribution
- C. Wake fraction
- D. Speed of advance

Correct answer: C

21. 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. Whether or not the transferring ship is a "Public Vessel of the United States"
- B. The size of the slop tank required under 155.330
- C. The identity of the product to be transferred
- D. The status of the oily water separator

Correct answer: C

22. Which will most likely occur when your vessel enters shallow water?

- A. The vessel's trim will change
- B. Rudder action will become more effective
- C. The vessel's list will decrease
- D. An increase in speed will occur

Correct answer: A

23. What is NOT an indication that pack ice may be nearby?

- A. Ice blink
- B. The presence of icebergs
- C. Absence of wave motion
- D. Sighting a walrus in the Arctic

Correct answer: B

24. Which signal must you display at night on a docked tank barge to show that it is loading or discharging flammable liquid cargo?

- A. Red light
- B. Two orange lights
- C. Flashing amber light
- D. ICC yellow light

Correct answer: A

25. You have orders to load cargoes of carbon disulfide, diisopropylamine and pyridine on your multi-product tankship. Which statement is true?

- A. Pyridine and diisopropylamine may not be carried in tanks having a common header vent.
- B. Pyridine must be separated from carbon disulfide by two barriers (cofferdams, voids, empty tanks, etc.).
- C. A tank of diisopropylamine may be used to separate a tank of pyridine from a tank of carbon disulfide.
- D. Carbon disulfide may be carried in NOS. 1 and 2 center tanks and diisopropylamine in NOS. 1 and 2 wing tanks.

Correct answer: A

26. Camphor oil is classified as a _____.

- A. Grade A flammable liquid
- B. Grade C flammable liquid
- C. Grade D combustible liquid
- D. Grade E combustible liquid

Correct answer: C

27. A clause in the charter party requires a vessel's owner to pay dispatch money when which of the conditions exists?

- A. The vessel changes berths to expedite loading or discharging
- B. The vessel is not ready to load or discharge cargo
- C. The vessel does not load and discharge its cargo in the time specified
- D. The vessel loads and discharges its cargo in less time than specified

Correct answer: D

28. Your tow includes a loaded chlorine barge. After inspecting the tow, the mate reports that he hears a hissing sound coming from the safety valves. Where will you find information on emergency procedures concerning the uncontrolled release of cargo?

- A. Cargo Information Card on your towboat
- B. Dangerous Cargo Regulations
- C. Cargo Manifest or loading paper
- D. Barge's Certificate of Inspection

Correct answer: A

29. An icebreaker may use the code letter "K" to remind ships of their obligation to listen continuously on their radio. How can this signal be communicated to other vessels?

- A. By visual signal
- B. By sound signal
- C. By light signal
- D. All of the above

Correct answer: D

30. A bridle for an ocean tow consists of which components?

- A. Two chains of equal length
- B. Two short legs of wire rope shackled to a fishplate
- C. A single length of heavy chain with both ends secured on deck to welded pad eyes
- D. A single nylon pendant rove through a heavy ring free to move on the pendant

Correct answer: A

31. What is the meaning of a flag hoist consisting of the code letters "WM" (Whiskey Mike) when displayed by an icebreaker?

- A. "I am going ahead; follow me."
- B. "Icebreaker support is now commencing."
- C. "Icebreaker support is finished."
- D. "You should stop your vessel instantly."

Correct answer: B

32. Either one approved B-V semi-portable or post 2017 One 160-B extinguisher is required to protect the engine room on uninspected towing vessels whose construction was contracted for before what date?

- A. February 1, 2002
- B. August 27, 2003
- C. April 29, 2004
- D. April 29, 2005

Correct answer: B

33. What is the name of a small light tackle with blocks of steel or wood that is used for miscellaneous small jobs?

- A. Chockablock
- B. Handy-billy
- C. Snatch block
- D. Threefold purchase

Correct answer: B

34. What is the mechanical advantage, neglecting friction, of tackle number 4 as shown in illustration D029DG below?

- A. 1
- B. 2
- C. 3
- D. 4

Correct answer: D

35. The equipment required to remove an on-deck oil spill on a barge transferring oil may be carried on board or at which other location?

- A. Located on a tug standing by
- B. Located at the shoreside hose connection during transfer
- C. Kept in a protected shoreside location readily accessible
- D. Available by prearrangement with the shore facility

Correct answer: D

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

Correct answer: B

37. You are conducting trials to determine the maneuvering characteristics of your vessel. While making a turn, you take ranges and bearings of an isolated light. The results are shown in illustration D034DG below. What is the transfer for a turn of 90°?

- A. 355 yards
- B. 400 yards
- C. 475 yards
- D. 510 yards

Correct answer: B

38. What can be done to prevent small oil spills on deck from going overboard?

- A. Plugging the drains and scuppers
- B. Driving wooden plugs into the vents
- C. Plugging the sounding pipes
- D. Closing the lids on the vents

Correct answer: A

39. An icebreaker assisting a vessel through an ice field would display a visual signal consisting of the code letter "I" (India) to signify that "_____".

- A. I am operating astern propulsion
- B. My vessel is stopped and making no way through the water
- C. I am altering my course to port
- D. I am altering my course to starboard

Correct answer: C

40. Cargo tanks on barges fitted with goose neck vents and flame screens are limited to carrying which grade of cargo?

- A. A and below
- B. B and below
- C. C and below
- D. D and E only

Correct answer: D

41. You are the operator of a 290 GRT uninspected towing vessel whose construction was contracted for after August 27, 2003. Which type of semi-portable fire extinguishing system is required on your vessel?

- A. B-III or post 2017 140-B
- B. B-IV or post 2017 150-B
- C. B-V or post 2017 160-B
- D. None of the above

Correct answer: C

42. Which term defines the distance that a ship moves forward with each revolution of its propeller, if there is no slip?

- A. Transfer
- B. Head reach
- C. Pitch
- D. Advance

Correct answer: C

43. A tow consists of 8 barges: 6 jumbo barges made up 3 abreast and 2 long, with 2 standard barges abreast as lead barges. How long is this tow?

- A. 525 feet
- B. 545 feet
- C. 565 feet
- D. 595 feet

Correct answer: C

44. According to uninspected vessel regulations what is NOT listed on the metallic name plate required to be attached to hand portable fire extinguishers?

- A. The hydrostatic test date of the cylinder
- B. The rated capacity in gallons, quarts, or pounds
- C. An identifying mark of the actual manufacturer
- D. The name of the item

Correct answer: A

45. 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

46. To lead the towing hawser over the center of the stern when not under a strain you could take which action?

- A. Hold it in the median position by a gob rope
- B. Fairlead it through a stern roller chock
- C. Lead it through the Norman pins
- D. All of the above if the vessel is so equipped

Correct answer: D

47. Cargo tanks carrying grades D or E liquids on tank barges are required to be vented with which of the following?

- A. Branch vent lines and a vent header
- B. Pressure-vacuum relief valves
- C. Forced draft blowers
- D. Gooseneck vents and flame screens

Correct answer: D

48. The regulations for a general alarm system on a towing vessel require all of the following EXCEPT which function?

- A. Has a contact maker at the operating station
- B. Has installed a flashing red light in areas that have high background noise
- C. Must be used instead of the public address system
- D. Is capable of notifying persons in any accommodation, work space and the engine room

Correct answer: C

49. On uninspected vessels which statement is TRUE concerning work vests?

- A. They may be worn during drills.
- B. They need not be of an approved type.
- C. They may be substituted for up to 10% of the required lifesaving gear aboard.
- D. They must be stowed separately from approved life preservers.

Correct answer: D

50. Which term describes the section of each end of a barge which is heavily reinforced to take the pressure of pushing?

- A. Collision bulkhead
- B. Bullnose
- C. Towhead
- D. Headlog

Correct answer: D

51. What affect does shallow water have on a vessel's stopping distance?

- A. The stopping distance is longer.
- B. The stopping distance is shorter.
- C. There is no difference in the stopping distance.
- D. The propeller is more effective when going astern in shallow water.

Correct answer: A

52. Which describes ice blink?

- A. A water sky
- B. A whitish glare on the underside of a cloud layer
- C. The soft light appearance on the underside of a cloud layer due to reflection from a surface of open water
- D. The dark appearance of the underside of a cloud layer due to reflection of a surface of open water

Correct answer: B

53. In towing why is it desirable for the tug and the tow to ride wave crests simultaneously?

- A. The tow is more visible from the tug
- B. The shock loading on the tow line is reduced
- C. The towing speed is improved
- D. The catenary of the towline is reduced

Correct answer: B

54. In general, an un-reinforced vessel can safely navigate in ice provided the concentration does not exceed how many tenths?

- A. 9 - 10 tenths
- B. 6 - 8 tenths
- C. 4 - 6 tenths
- D. 1 - 3 tenths

Correct answer: D

55. Fire protection regulations for towing vessels require that drills be conducted on board the vessel as if there were an actual emergency. Drills include all of the following, EXCEPT which item?

- A. One person putting on protective clothing, if the vessel is so equipped
- B. Breaking out and using the vessel's emergency equipment
- C. Testing all alarm and detection systems
- D. Participation by selected crew members

Correct answer: D

56. What is the name of tackle number 3 as shown in illustration D029DG below?

- A. Single luff tackle
- B. Gun tackle
- C. Double whip
- D. 1-2 purchase

Correct answer: A

57. You are heading into the sea during rough weather. What may happen if there is too much weight forward in your small boat?

- A. The craft will rise rapidly over the wave
- B. The craft may plunge into the wave
- C. The craft will list severely
- D. The craft will broach

Correct answer: B

58. What is the period of validity of a Safety Management Certificate?

- A. 60 months
- B. 48 months
- C. 42 months
- D. 36 months

Correct answer: A

59. Your vessel is broken down and rolling in heavy seas. How can you reduce the danger of capsizing?

- A. Constantly shifting the rudder
- B. Rigging a sea anchor
- C. Move all passengers to the stern
- D. Move all passengers to one side of the boat

Correct answer: B

60. A U.S. Coast Guard icebreaker, while escorting ships in ice, has sounded four short and one long blasts on the whistle. What does this indicate?

- A. The vessel has become icebound, Stop
- B. The vessel is increasing the distance between vessels
- C. The vessel is increasing speed; watch for broken ice
- D. The vessel has its engines full astern, stay clear

Correct answer: A

61. What is a grapnel?

- A. A type of clam bucket used for discharging bulk cargo
- B. A device for securing a chain topping lift
- C. A device used to drag for a submerged cable or line
- D. A hook to prevent the anchor cable from slipping

Correct answer: C

62. The lead of a tow bridle is usually redirected with which item?

- A. Pad eye
- B. Bollard
- C. Chock
- D. Devil's claw

Correct answer: C

63. Which statement is TRUE concerning cargo hose on tank barges?

- A. Cargo hose must be able to withstand at least 150 psi.
- B. Cargo hose must be able to withstand the shut-off head less the static head of the cargo pump but no less than 100 psi.
- C. Cargo hose must be able to withstand the shut-off head plus the static head of the cargo pump.
- D. Cargo hose must be able to withstand the static head of the cargo pump but no less than 100 psi.

Correct answer: A

64. A tow of 9 barges is made up three abreast and three long. The towboat is faced up to the center string. What is the name of this string?

- A. Push string
- B. Main string
- C. Power string
- D. Face string

Correct answer: A

65. What effect does bank cushion have on the hull of a vessel in shallow water?

- A. The hull has a greater pressure on the land side of the stern
- B. The hull has a lesser pressure on the land side of the stern
- C. The hull has a greater pressure on the land side of the bow
- D. The hull has a lesser pressure on the land side of the bow

Correct answer: C

66. In accordance with U.S. regulations which statement is true concerning packages containing Class 1 explosive material?

- A. Defective packages of Class 1 materials may be accepted for shipment
- B. Defective package of Class 1 materials may be repaired onboard the vessel
- C. Defective packages of Class 1 materials require a Statement of Fact to be submitted prior to loading
- D. Defective packages of Class 1 materials may not be accepted for shipment

Correct answer: D

67. Who may certify a towing vessel's fire detection system to comply with the Coast Guard's fire protection regulations?

- A. A Coast Guard inspector
- B. A licensed electrician
- C. A registered professional engineer
- D. The owner or Master of the vessel

Correct answer: C

68. Which term defines when a vessel is swinging from side to side off course due to quartering seas?

- A. Yawing
- B. Pitchpoling
- C. Rolling
- D. Broaching

Correct answer: A

69. Which statement defines the term "gross tonnage"?

- A. The weight of the vessel measured in long tons
- B. The vessel's approximate volume less certain exempt spaces
- C. The weight of a grossly overloaded vessel
- D. The weight of a vessel with all tanks full

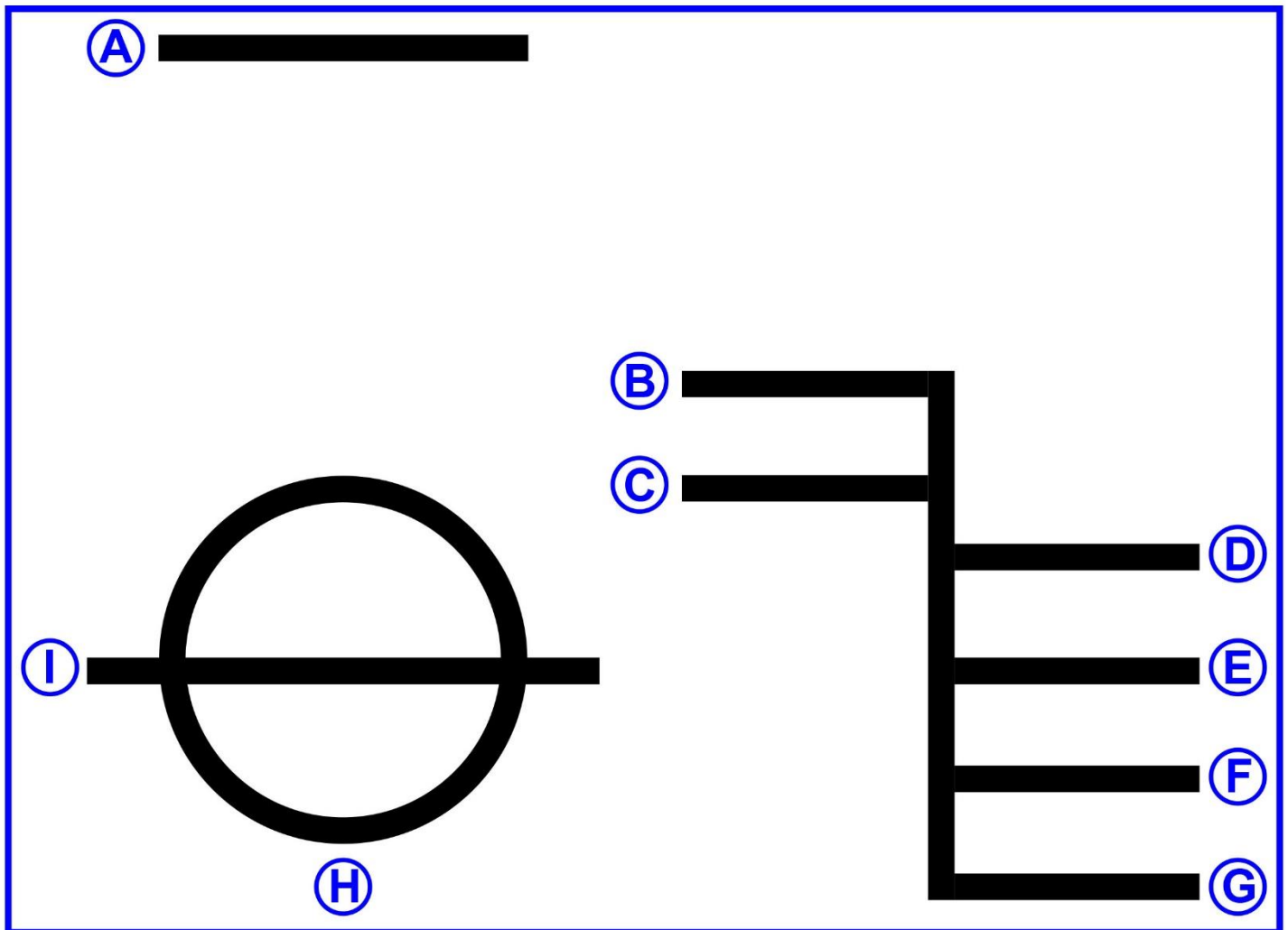
Correct answer: B

70. Which best describes a "fishplate" used in towing?

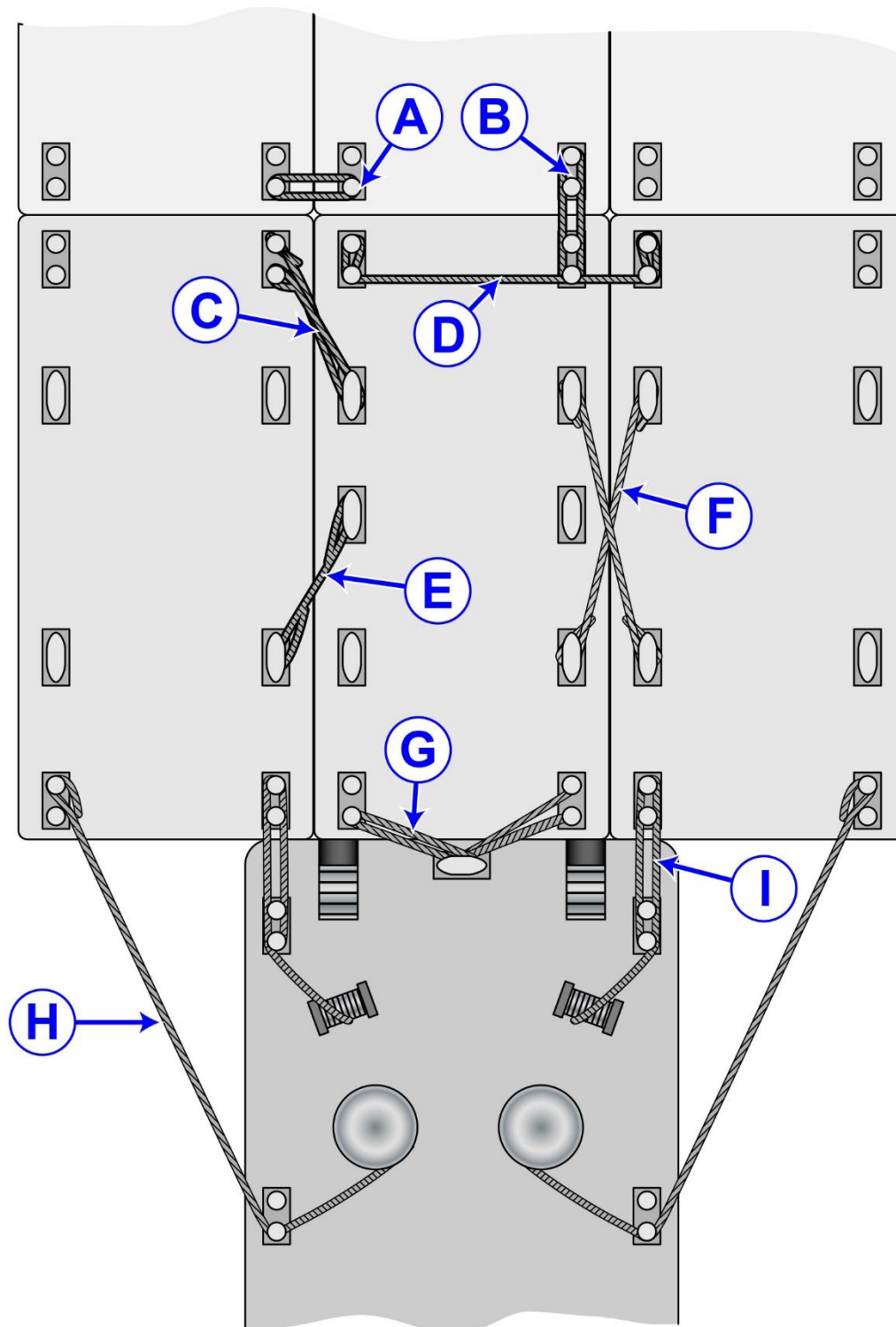
- A. A steel plate in the shape of a flat fish
- B. A circular piece of heavy steel with three holes forming an equilateral triangle
- C. A triangular-shaped heavy steel plate with a round hole inset from each corner
- D. A rectangular-shaped piece of heavy steel plate with four holes

Correct answer: C

D003DG

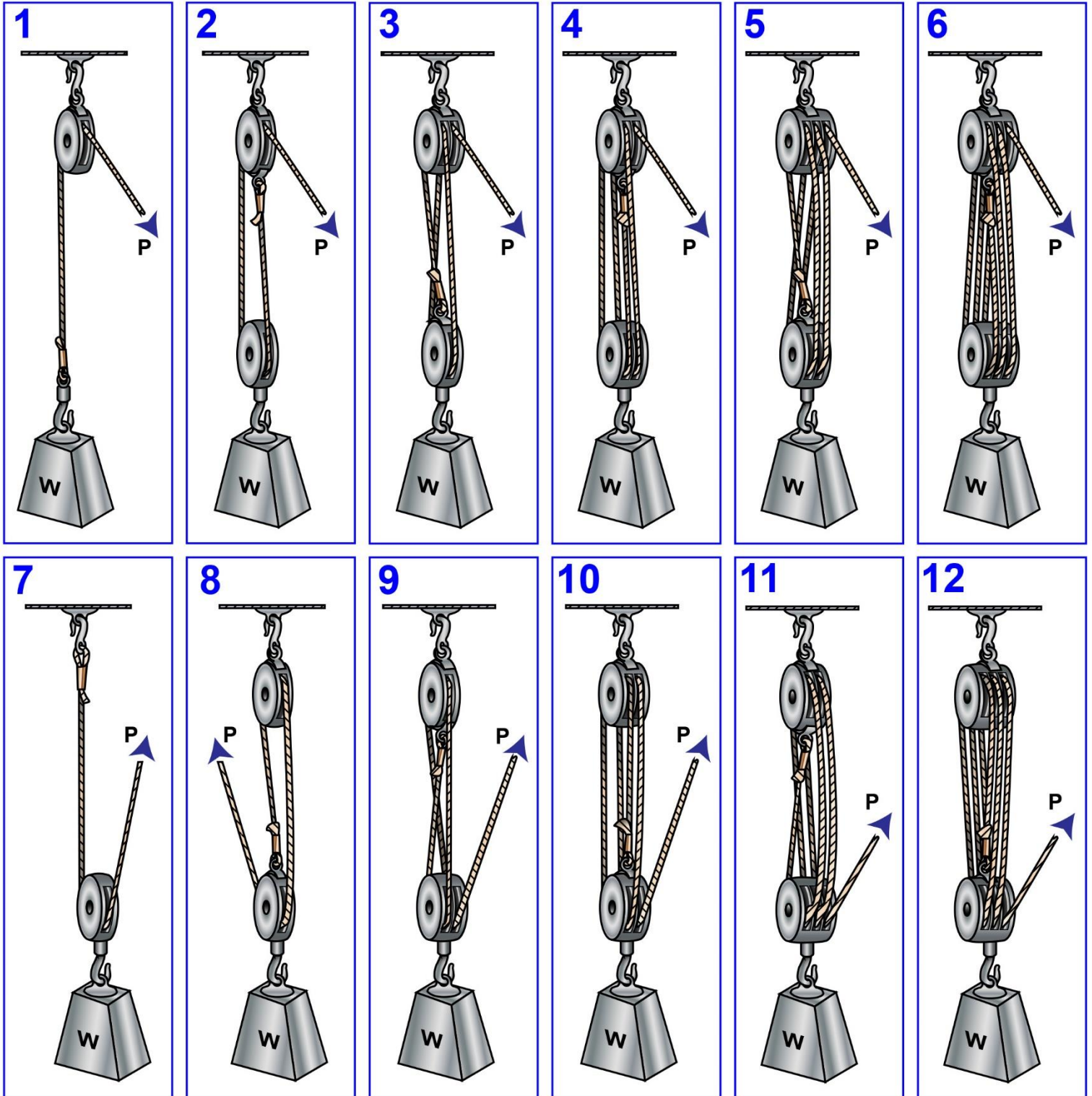


D024DG



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D029DG



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D034DG

HEADING (TRUE)	BEARING (TRUE)	RANGE (YDS)	REMARKS
228°			INITIAL HEADING
228°	232°	2260	ON INITIAL COURSE
228°	234°	1700	RIGHT FULL RUDDER ORDERED
230°	236°	1490	
252°	235°	1275	
275°	231°	1000	
316°	214°	850	
352°	198°	975	
022°	194°	1210	
053°	197°	1430	
087°	202°	1600	
115°	209°	1690	
151°	217°	1700	
183°	225°	1600	
218°	232°	1350	RUDDER AMIDSHIPS
228°	235°	1125	STEADY ON 228°