

U.S.C.G. Merchant Marine Exam
Second/Third Mate of Unlimited Tonnage
Q111 Deck General
(Sample Examination)

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

1. What is a grapnel?

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

Correct answer: B

2. Which of the following is the strongest of the natural fibers?

- A. Manila
- B. Hemp
- C. Sisal
- D. Cotton

Correct answer: A

3. Two mooring lines may be placed on the same bollard and either one cast off first if which action is taken?

- A. The mooring lines are doubled
- B. The eye of the second line is dipped
- C. The bollard has two horns
- D. One of the lines is a breast line

Correct answer: B

4. 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

5. Under identical load conditions, nylon, when compared with natural fiber line, will respond in which manner?

- A. Nylon will stretch more and have less strength
- B. Nylon will stretch less and have greater strength
- C. Nylon will stretch more and have greater strength
- D. Nylon will stretch less and have less strength

Correct answer: C

6. Which item is designed to show the position of the Rudder on the bridge?

- A. The Rapson slide indicator
- B. The rudder angle indicator
- C. The telemotor position
- D. The follow-up gear

Correct answer: B

7. What does the helm command "Left twenty" mean?

- A. Put the rudder left twenty degrees and then ease back as the vessel starts swinging
- B. Put the rudder left twenty degrees
- C. Put the rudder hard left for the first twenty degrees of swing
- D. Change course twenty degrees to the left

Correct answer: B

8. In small craft terminology, which term is used to identify all of the anchor gear between a boat and her anchor?

- A. The chock
- B. The stock
- C. The rode
- D. The scope

Correct answer: C

9. Which part of an anchor actually digs into the bottom?

- A. Crown
- B. Fluke
- C. Shank
- D. Stock

Correct answer: B

10. Which is the BETTER holding ground, for a conventional anchor?

- A. A very soft mud
- B. A mixture of mud and clay
- C. A shale bottom
- D. A rocky bottom

Correct answer: B

11. Which action should you take FIRST when preparing to hoist the anchor?

- A. Take off the chain stopper
- B. Put the brake in the off position
- C. Lock in the wildcat
- D. Raise riding pawl off of the chain

Correct answer: C

12. Your vessel is off a lee shore in heavy weather and laboring. Which action should you take?

- A. Put the bow directly into the sea and proceed at full speed.
- B. Put the sea and wind on either quarter and proceed at increased speed.
- C. Heave to in the trough of the sea.
- D. Put the sea and wind about two points on either bow and reduce speed.

Correct answer: D

13. When making way in heavy seas you notice that your vessel's screw is being lifted clear of the water and racing. Which action will correct the situation?

- A. Increase the vessel's speed
- B. Shift more weight forward
- C. Decrease the vessel's speed
- D. Shift the rudder back and forth several times

Correct answer: C

14. Which is usually the most gentle way of riding out a severe storm on a larger vessel?

- A. Head into the seas at slow speeds
- B. Hove to
- C. Rig a sea anchor
- D. Running before the seas

Correct answer: D

15. In relation to the turning circle of a ship, which defines the term "transfer"?

- A. The distance gained in the direction of the original course
- B. The distance around the circumference of the turning circle
- C. The distance the ship moves sidewise from the original course away from the direction of the turn after the rudder is first put over
- D. The distance gained at right angles to the original course

Correct answer: D

16. 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 with the results as shown. Based on this information, what is the advance for a turn of 90°? Illustration D034DG

- A. 820 yards
- B. 870 yards
- C. 930 yards
- D. 975 yards

Correct answer: B

17. Where is the pivoting point located on a fully loaded vessel with normal trim proceeding ahead at sea speed?
- A. Two-thirds the length of the vessel from the bow
 - B. Right at the bow
 - C. One-half the length of the vessel from the bow
 - D. One-third the length of the vessel from the bow

Correct answer: D

18. While proceeding up a narrow waterway you observe a vessel berthed in the river with slack mooring lines. Which is the most prudent action to take FIRST?
- A. Reduce the speed of your vessel
 - B. Give 5 short blasts on the whistle
 - C. Contact the moored vessel
 - D. Call the US Coast Guard

Correct answer: A

19. Ice concentration is measured in tenths. What concentration range of ice corresponds to 1- 3 tenths?
- A. Very Open Pack
 - B. Very Close Pack
 - C. Open Pack
 - D. Close Pack

Correct answer: A

20. An icebreaker assisting a vessel through an ice field would display a visual signal consisting of the code letter "E" (Echo). What does this signal indicate?
- A. I am altering my course to port
 - B. My vessel is stopped and making no way through the water
 - C. I am altering my course to starboard
 - D. I am operating astern propulsion

Correct answer: C

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

Correct answer: D

22. A synonym for chloroform is _____.
- A. 4-methyl phenol
 - B. chlorine gas
 - C. sulfuric chlorohydrin
 - D. trichloromethane

Correct answer: D

23. Which is TRUE of a pelican hook?

- A. It can only be used for light loads
- B. It can be released while under strain
- C. It is always used for lifeboat falls
- D. It is used for extra heavy loads

Correct answer: B

24. Pedestal cranes have limit switches to restrict the movement of which function?

- A. Slew travel limits
- B. Luff travel limits
- C. Turntable limits
- D. All of the above

Correct answer: D

25. A vessel has a deadweight carrying capacity of 10,500 tons. Fuel, water, and stores require 1500 tons. The cubic capacity is 500,000 cubic feet. Which cargo will put her full and down?

- A. Slabs of zinc, SF 7.1
- B. Barrels of tallow, SF 66.8
- C. Rolls of barbed wire, SF 55.5
- D. Bundles of rubber, SF 140.2

Correct answer: C

26. Which statement(s) is/are TRUE concerning crane cargo operations?

- A. Lifting points on all equipment must be safely checked prior to commencing a lift.
- B. Never exceed crane manufacturer's limits concerning the safe working loads of cargo jibs.
- C. Cargo loaded into vehicles and/or containers prior to lifting needs to be properly secured so as to prevent shifting during transport.
- D. All the above

Correct answer: D

27. What is NOT required as special safety equipment on a tankship carrying hazardous cargoes in bulk?

- A. A safety locker adjacent to the emergency shutdown station
- B. Equipment to lift an injured person from a pumproom
- C. Shower and eyewash fountain
- D. Two portable vapor detectors suitable for the cargoes carried

Correct answer: D

28. What does item "K" refer to in illustration D045DG of a 30-ton pedestal crane? Deck Illustration D045DG

- A. Cargo snaking cables
- B. Rider block taglines
- C. Manual slewing cables
- D. Jib luffing cables

Correct answer: B

29. Which of the following is classified as a flammable liquid?

- A. Butane
- B. Bunker C
- C. Mineral spirits
- D. Methyl alcohol

Correct answer: D

30. Prior to handling Class 1 explosive materials, which signal(s) is/are required to be displayed by the vessel?

- A. an all-round flashing blue light
- B. the Bravo flag and a flashing red all-round light
- C. the Bravo flag and signs posted prohibiting smoking
- D. an announcement on VHF channel 16 every hour

Correct answer: C

31. You are loading benzyl chloride and a small quantity spills on deck. According to the Chemical Data Guide, which of the following may be used as a substitute for water for the cleanup procedure?

- A. Sodium carbonate
- B. Alcohol
- C. Soda ash solution
- D. Sodium bisulfite

Correct answer: A

32. Sulfuric acid is a _____.

- A. clear syrupy liquid with no odor
- B. whitish liquid with a faint, pleasant odor
- C. colorless liquid with a pleasant fruity odor
- D. colorless-to-brown liquid with a choking odor when hot

Correct answer: D

33. In a tank vessel constructed in 1970, carrying grade A, B, C, or D liquid cargo, what is required to isolate cargo pumps from sources of vapor ignition?

- A. Passageways or living quarters
- B. General cargo spaces
- C. Cofferdams
- D. Gastight bulkheads

Correct answer: D

34. Where is a permanently installed system of gas detection required?

- A. Air locks
- B. Cargo pump rooms
- C. Cargo compressor rooms
- D. All of the above

Correct answer: D

35. To determine which grades of cargo a tank vessel is permitted to carry you take which action?

- A. Refer to the vessel's Certificate of Inspection
- B. Examine the cargo tanks and fittings
- C. Ask the terminal supervisor or his representative
- D. Check the loading order

Correct answer: A

36. When bunkering at a dock which of the following signals must be displayed?

- A. A red flag by day, a blue light by night
- B. A green flag by day, green light by night
- C. A red flag by day, red light by night
- D. A yellow flag by day, red light by night

Correct answer: C

37. Which is a precaution you should take before bunkering?

- A. Plug the sounding pipes
- B. Close the lids on the vents
- C. Plug the vents
- D. Plug the scuppers

Correct answer: D

38. When bunkering at anchorage which of the following signals must be displayed?

- A. A red flag by day ONLY
- B. A red flag by day, red light by night
- C. A red light by night ONLY
- D. No signal required at anchorage

Correct answer: A

39. Your ship has loaded 22,000 barrels of crude oil, departing Valdez, Alaska for Panama. When loaded the cargo temperature was 90°F. API was 15°. The volume correction factor (VCF) is .0004. If the cargo temperature is expected to be 100°F at the discharge port, how many barrels will be offloaded?

- A. 21,252
- B. 21,912
- C. 22,088
- D. 22,748

Correct answer: C

40. While discharging a tanker, how can the list be controlled?

- A. Using wing tanks near the longitudinal center, discharging as necessary
- B. Using a center tank near the bow, discharging as necessary
- C. Using the after peak tank, loading as necessary
- D. By the shoreside personnel

Correct answer: A

41. When referring to quantity of barite in a P-tank, ullage is the _____.

- A. percentage of barite in the tank
- B. distance of the barite surface below the tank cover
- C. distance of the barite surface above the tank bottom
- D. total weight of barite in UPC (ullages per centimeter)

Correct answer: B

42. Flammable liquid means any liquid which gives off flammable vapors at or below _____.

- A. 40°F (4.4°C)
- B. 80°F (26.7°C)
- C. 110°F (43.3°C)
- D. 150°F (65.6°C)

Correct answer: B

43. Each hose used for transferring vapors must _____.

- A. be electrically continuous with a maximum resistance of ten thousand ohms
- B. have a design burst pressure of at least 25 psig
- C. be capable of withstanding at least 2.0 psi vacuum without collapsing or constricting
- D. All of the above

Correct answer: D

44. The liquid-filled PV breaker has acted to relieve a vacuum in a tank. What action must be taken in regard to the PV-breaker before continuing operations?

- A. Install a new rupture disc.
- B. Refill the breaker with liquid.
- C. Manually reset the vacuum side of the breaker.
- D. Check to make certain that it has reset itself.

Correct answer: B

45. Which topic is NOT required to be discussed at the pre-transfer conference?

- A. Estimated time of finishing cargo
- B. Emergency shutdown procedures
- C. Identity of the product to be transferred
- D. Details of transferring and receiving systems

Correct answer: A

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

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

Correct answer: B

47. When carrying a cargo of asphalt or molten sulfur, which are carried at temperatures of over 300°F, one of the biggest dangers is _____.

- A. having the cargo too cool
- B. inadequate ullage space
- C. water in the tanks or pipelines
- D. explosion of vapors after discharge

Correct answer: C

48. Who will certify the vessel to be gas free before entering the shipyard?

- A. A dedicated company representative
- B. The chief officer
- C. A shoreside marine chemist
- D. A representative from the vessel's class society

Correct answer: C

49. A marine chemist issues gas free certificates and is certified by which organization?

- A. American Chemical Society
- B. Marine Chemists Association
- C. National Fire Protection Association
- D. Mine Safety Appliance Association

Correct answer: C

50. Annex V to MARPOL 73/78 contains requirements pertaining to the discharge into the marine environment of which item?

- A. Oil
- B. Noxious liquid substances
- C. Garbage
- D. Air pollutants

Correct answer: C

51. A load line certificate is valid for how many years?

- A. 1
- B. 2
- C. 3
- D. 5

Correct answer: D

52. What is the name of the mark indicated by the letter F in illustration D003DG below?

- A. Fresh water load line
- B. Winter load line
- C. Summer load line
- D. Tropical load line

Correct answer: B

53. Which term is sometimes used to refer to a disk with a horizontal line through its center, equivalent to the summer load line on a vessel?
- A. The maximum allowable draft mark
 - B. The tonnage mark
 - C. The Plimsoll mark
 - D. The deadrise mark

Correct answer: C

54. 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. LWL
 - C. LBP
 - D. LOA

Correct answer: C

55. Which condition must be met during a stability test on an inspected vessel?
- A. Water under vessel must be deep enough to prevent grounding
 - B. Each tank must be partially full to show it does not leak
 - C. All dunnage, tools, and extraneous items are secured
 - D. The vessel must be moored snugly

Correct answer: A

56. Who must approve the vessel's trim and stability booklet?
- A. International Maritime Organization
 - B. United States Coast Guard
 - C. National Cargo Bureau
 - D. Society of Naval Architects and Marine Engineers

Correct answer: B

57. To allow for the rise or fall in tide and for change in draft of a tankship during cargo transfer, how must the cargo hoses be secured?
- A. With enough slack to allow vessel to move to its mooring limits
 - B. With topping lifts and runners tied off to winches
 - C. Using slings or saddles placed at 25-foot (8 meter) intervals
 - D. All of the above

Correct answer: A

58. Which list is NOT required to be provided as part of the appendices of the Shipboard Oil Pollution Emergency Plan?
- A. A list of duty assignments for the shipboard personnel
 - B. A list of agencies or officials of Coastal State Administrators responsible for receiving and processing incident reports
 - C. A list specifying who will be responsible for informing the parties listed and the priority in which they must be notified
 - D. A list of agencies or officials in regularly visited ports

Correct answer: A

59. Which is an exception to the garbage discharge requirements in Annex V to MARPOL 73/78?
- A. The destination port or terminal cannot receive garbage.
 - B. The garbage to be discharged will sink.
 - C. A person falls overboard, and a plastic ice chest is thrown for flotation.
 - D. Garbage accumulation on board has exceeded storage space.

Correct answer: C

60. What must Inland vessels of 100 GT and over be fitted with for oily mixtures?
- A. A portable system to discharge oily mixtures to a reception facility
 - B. A portable system to discharge the slops overboard
 - C. A fixed system to discharge oily mixtures to a reception facility
 - D. A fixed system to discharge the slops overboard

Correct answer: C

61. Your vessel is at a dock taking bunkers. If oil begins to flow out of a tank vent, what should you do FIRST?
- A. Close the valve on the tank vent line.
 - B. Signal the shore control point to shut down.
 - C. Open the intake valve to an adjacent tank.
 - D. Set out drip pans and sawdust and begin to mop up the spill.

Correct answer: B

62. Remote controls for quick-closing shut off valves are required in how many location(s)?
- A. 1
 - B. 2
 - C. 3
 - D. 4

Correct answer: B

63. How many months after its expiration date may a Coast Guard credential be renewed without retaking the complete exam?
- A. 1 month
 - B. 6 months
 - C. 12 months
 - D. 24 months

Correct answer: C

64. A credential for apprentice mate (steersman) of towing vessels shall be renewed within what time period before or after the expiration date?
- A. 12 months
 - B. 30 days
 - C. 90 days
 - D. 6 months

Correct answer: A

65. The supplement to the IOPP Certificate contains what type of data?
- A. The trade routes upon which the vessel may operate
 - B. A checklist of the equipment installed for controlling the discharge of oil
 - C. The grades of cargo that an oil tanker is permitted to carry
 - D. A list of the underwriters who will assume financial responsibility in the event of an oil spill.

Correct answer: B

66. An International Tonnage Certificate will be issued to a vessel when it meets several requirements. Which is one of the requirements?
- A. Will engage in intercoastal trade
 - B. Must be 79 or more feet in length
 - C. Has been issued a Certificate of Inspection
 - D. Admeasure over 100 GT

Correct answer: B

67. The number of certificated able seamen and lifeboatmen required on a vessel is determined by which organization?
- A. International Maritime Organization
 - B. Coast Guard
 - C. American Bureau of Shipping
 - D. Corps of Engineers

Correct answer: B

68. Which item must be entered in the official log?
- A. Names of night mates and engineers
 - B. All engine orders
 - C. Drafts upon leaving port
 - D. Number of cargo gangs on board

Correct answer: C

69. A seaman dies during a voyage. What is NOT required to be entered into the Official Log?
- A. Statement that the Master has taken custody of the deceased's MMD and passport
 - B. Statement of the wages due
 - C. Statement as to the total deductions to be made from the wages
 - D. An inventory of the money and property

Correct answer: A

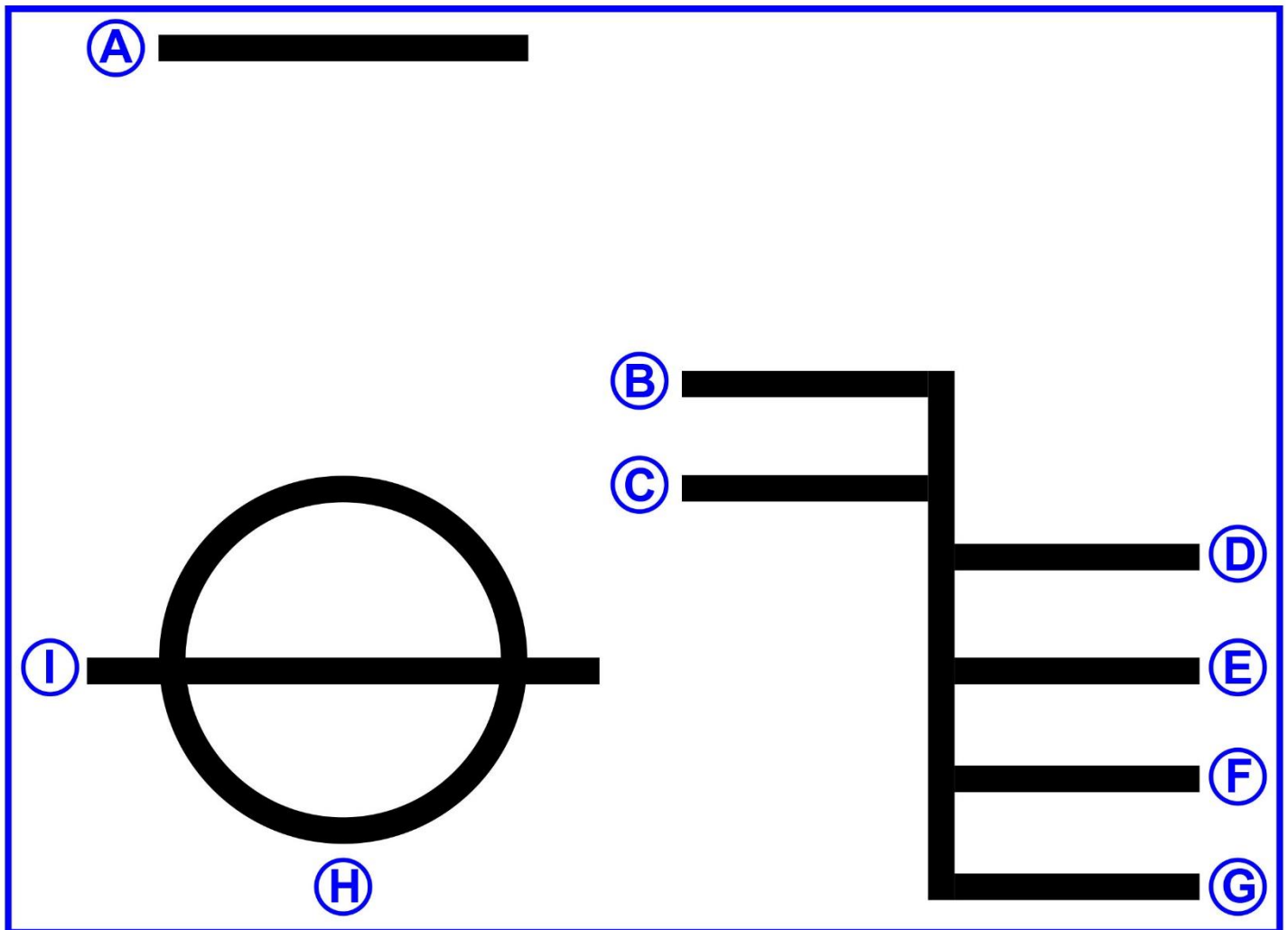
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Illustrations: 4

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

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

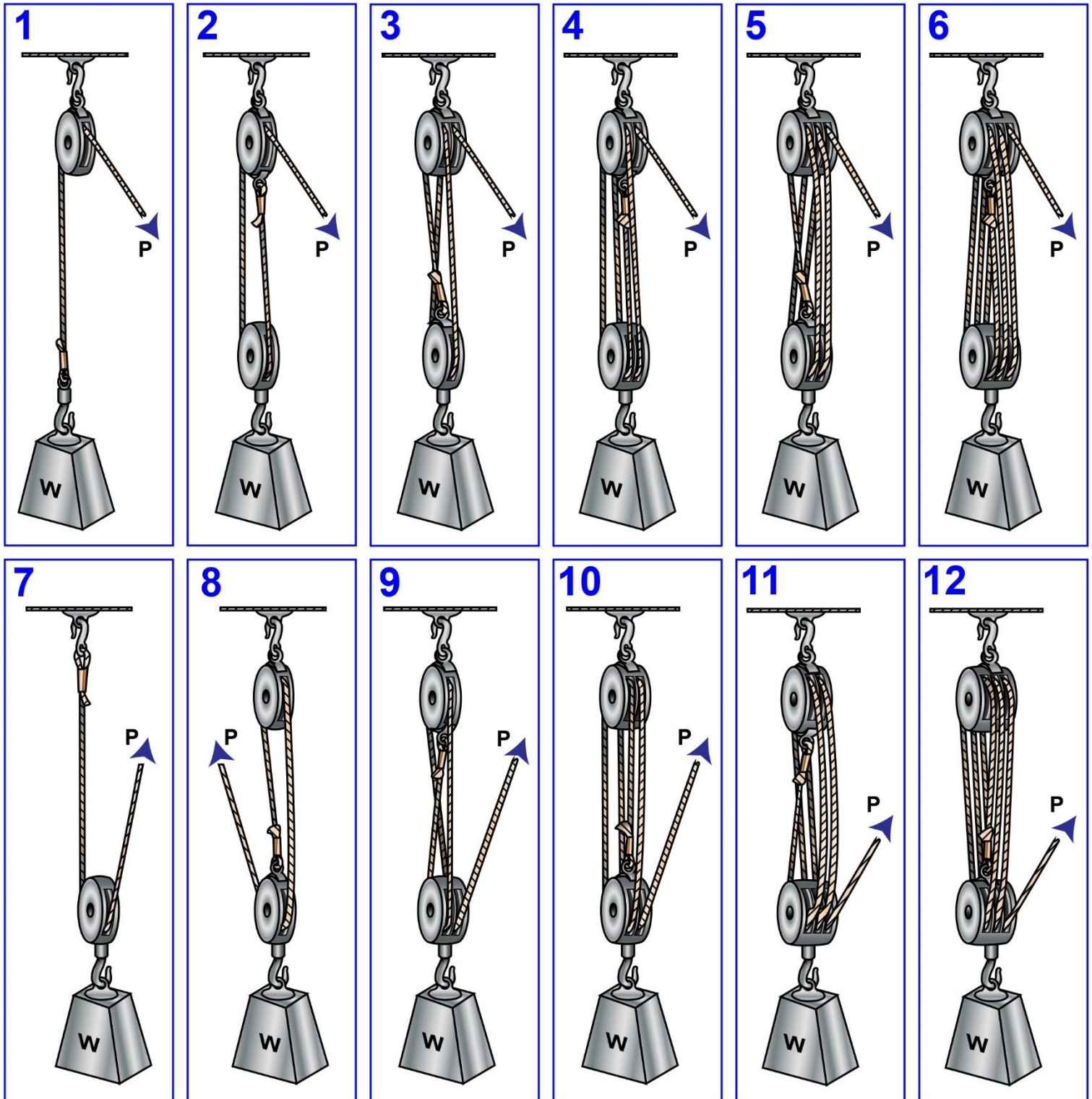
Correct answer: A

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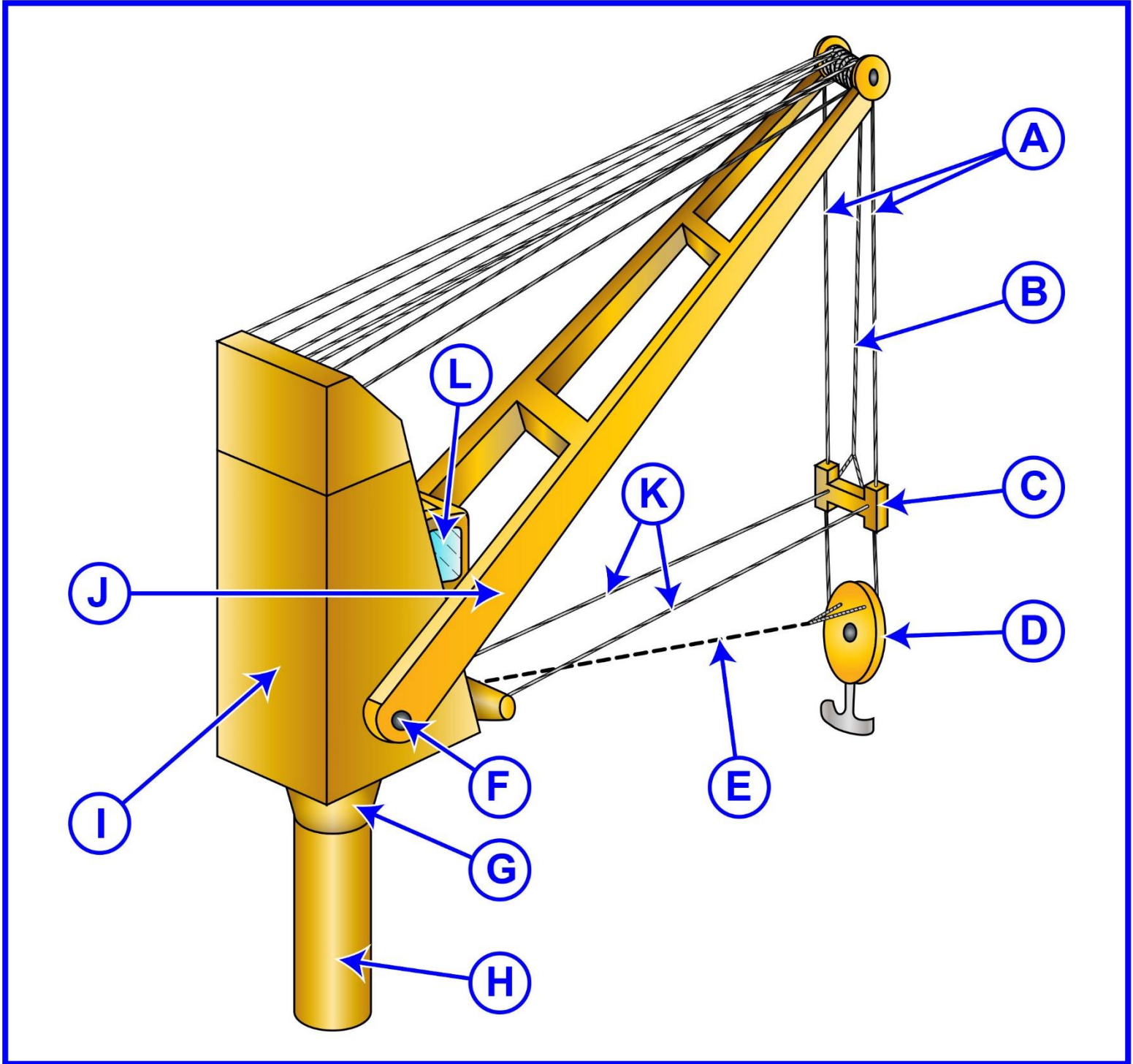
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D034DG

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°

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