

U.S.C.G. Merchant Marine Exam

OUPV to Master or Mate Less than 200 GRT
Great Lakes and Inland

Q346 Navigation and Deck General - Safety
(Sample Examination)

Choose the best answer to the following Multiple Choice Questions.

1. 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.

2. 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.

3. In illustration D041DG below, which symbol is the reference from which the height of the center of gravity is measured?

- (A) 5
- (B) 4
- (C) 3
- (D) 2

If choice D is selected set score to 1.

4. You are planning to anchor in an area where several anchors have been lost due to fouling. As a precaution, you should _____.

- (A) anchor with scope of 8 or more to 1
- (B) anchor using both anchors
- (C) use a stern anchor
- (D) fit a crown strap and work wire to the anchor

If choice D is selected set score to 1.

5. The distance between the waterline of a vessel and the main deck is called _____.

- (A) freeboard
- (B) camber
- (C) buoyancy
- (D) draft

If choice A is selected set score to 1.

6. 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.

7. The outlet at a fire hydrant may be positioned anywhere from horizontal to pointing _____.

- (A) vertically upward
- (B) 45° upward
- (C) vertically downward
- (D) all of the above

If choice C is selected set score to 1.

8. 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.

9. What is the name of tackle number 6 as shown in illustration D029DG below?

- (A) Triple purchase
- (B) Boat falls
- (C) Threefold purchase
- (D) Clew garnet tackle

If choice C is selected set score to 1.

10. 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.

11. 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.

12. How much weight can you lift by applying 100 lbs. of force to a twofold purchase rigged to disadvantage (do not consider friction)?

- (A) 200 lbs.
- (B) 300 lbs.
- (C) 400 lbs.
- (D) 500 lbs.

If choice C is selected set score to 1.

13. A negative metacentric height _____.

- (A) will always cause a vessel to capsize
- (B) should always be immediately corrected
- (C) always results from off-center weights
- (D) All of the above are correct

If choice B is selected set score to 1.

14. By convention, the Earth's south magnetic pole is colored _____.

- (A) red
- (B) blue
- (C) white
- (D) black

If choice A is selected set score to 1.

15. 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.

16. Magnets in the binnacles of magnetic compasses are used to reduce the effect of _____.

- (A) local attraction
- (B) deviation
- (C) variation
- (D) All of the above

If choice B is selected set score to 1.

17. 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.

18. A breeches buoy is being rigged from the shore to a stranded vessel. The initial shot line passed to the vessel is normally made fast to a _____.

- (A) hawser with breeches buoy and harness attached
- (B) hawser which should be made fast to the vessel below the intended location of the tail-block
- (C) hawser which is used to pass a tail-block and whip to the vessel
- (D) tail-block and whip which may be used to pass a hawser to the vessel

If choice D is selected set score to 1.

19. The standing part of a tackle is _____.

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

If choice D is selected set score to 1.

20. The best method of determining if a vessel is dragging anchor is to note _____.

- (A) any change in the tautness of the anchor chain
- (B) changes in bearings of fixed objects onshore
- (C) how much the vessel sheers while at anchor
- (D) the amount of line paid out

If choice B is selected set score to 1.

21. The enclosed area defined as the intersection of the surface of the water and the hull of a vessel is the _____.

- (A) amidships plane
- (B) longitudinal reference plane
- (C) waterplane
- (D) baseline

If choice C is selected set score to 1.

22. In illustration D033DG below, the structural member indicated by the letter K was fitted in segments between continuous longitudinals. It is known as which type of floor?

- (A) Lightened
- (B) Non-watertight
- (C) Open
- (D) Intercostal

If choice D is selected set score to 1.

23. A metal ring on the bottom of a block, to which the standing part of a tackle is spliced, is known as a(n) _____.

- (A) swivel
- (B) eye
- (C) loop
- (D) becket

If choice D is selected set score to 1.

24. 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.

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

- (A) 8"
- (B) 12"
- (C) 16"
- (D) 24"

If choice B is selected set score to 1.

26. If the compass heading and the magnetic heading are the same then _____.

- (A) there is something wrong with the compass
- (B) the compass is being influenced by nearby metals
- (C) there is no deviation on that heading
- (D) the deviation has been offset by the variation

If choice C is selected set score to 1.

27. The total magnetic effects which cause deviation of a vessel's compass can be broken down into a series of components which are referred to as _____.

- (A) divisional parts
- (B) coefficients
- (C) equations
- (D) fractional parts

If choice B is selected set score to 1.

28. A drift lead indicates that the vessel is dragging anchor when the line is _____.

- (A) slack
- (B) leading out perpendicular to the centerline
- (C) leading under the hull
- (D) taut and leading forward

If choice D is selected set score to 1.

29. When a small craft's anchor fouls in a rocky bottom, the first attempt to clear it should be made by _____.

- (A) making the line fast to the bitt and bringing the vessel further forward
- (B) reversing the angle and direction of pull, with moderate scope
- (C) hauling vertically on the line
- (D) increasing the scope and running slowly in a wide circle with the anchor line taut

If choice B is selected set score to 1.

30. 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.

31. The forward draft of your ship is 27'-11" and the after draft is 29'-03". The draft amidships is 28'-05".
Your vessel is _____.

- (A) listed
- (B) hogged
- (C) sagged
- (D) trimmed by the head

If choice B is selected set score to 1.

32. Recharging a previously used cartridge-operated dry-chemical extinguisher is accomplished by _____.

- (A) recharging the cartridge and refilling it with powder
- (B) authorized fire equipment servicing personnel only
- (C) replacing the propellant cartridge and refilling with powder
- (D) puncturing the cartridge seal after installation

If choice C is selected set score to 1.

33. The term that indicates how many tons of cargo a vessel can carry is _____.

- (A) bale cubic
- (B) deadweight
- (C) loaded displacement
- (D) gross tonnage

If choice B is selected set score to 1.

34. If passengers are on board when an abandon ship drill is carried out, they should _____.

- (A) take part
- (B) stay out of the way and do what they want
- (C) watch
- (D) go to their quarters

If choice A is selected set score to 1.

35. For the purpose of training and drills, if reasonable and practicable, how frequently should rescue boats be launched with their assigned crew?

- (A) once a year
- (B) once a week
- (C) once a month
- (D) twice a year

If choice C is selected set score to 1.

36. Carbon dioxide as a fire fighting agent has which advantage over other agents?

- (A) It is cheaper.
- (B) It is safer for personnel.
- (C) It is most effective on a per unit basis.
- (D) It causes minimal damage.

If choice D is selected set score to 1.

37. A fire hose with a nozzle attached must be connected to each hydrant except when exposed to heavy weather or when the _____.

- (A) fire hose might be damaged by cargo operations
- (B) vessel is in port
- (C) fire pumps are used for purposes other than supplying water to the fire main
- (D) fire-main system is not charged

If choice A is selected set score to 1.

38. In weighing CO₂ cylinders, they must be recharged if weight loss exceeds _____.

- (A) 15% of weight of full bottle
- (B) 10% of weight of charge
- (C) 10% of weight of full bottle
- (D) 20% of weight of charge

If choice B is selected set score to 1.

39. A person has fallen overboard and is being picked up with a lifeboat. If the person appears in danger of drowning, the lifeboat should make _____.

- (A) an approach across the wind
- (B) an approach from windward
- (C) the most direct approach
- (D) an approach from leeward

If choice C is selected set score to 1.

40. When a man who is conscious has fallen overboard is being picked up by a lifeboat, the boat should approach with the wind _____.

- (A) ahead and the victim just off the bow
- (B) just off the bow and the victim to leeward
- (C) just off the bow and the victim to windward
- (D) astern and the victim just off the bow

If choice B is selected set score to 1.

41. The Certificate of Freeboard is the _____.

- (A) Load Line Certificate
- (B) Admeasurer's Certificate
- (C) Forecastle Card
- (D) Certificate of Inspection

If choice A is selected set score to 1.

42. You are bound from port A governed by the summer load line mark to port B also governed by the summer mark. The great circle track will take you into a zone governed by the winter mark. Which statement is TRUE?

- (A) You must be at the winter mark when you enter the winter zone and cannot exceed the summer mark upon departing port A.
- (B) You can only load to the winter mark plus any fresh water allowance and burnout to sea at port A.
- (C) You cannot load beyond the summer mark at port A and must be at the winter mark upon arrival at port B.
- (D) You can load so that upon arrival at the pier at port B your freeboard is equal to the summer mark less any fresh water allowance.

If choice A is selected set score to 1.

43. What is the gyrocompass error resulting from your vessel's movement in OTHER than an east-west direction?

- (A) quadrantal error
- (B) damping error
- (C) speed error
- (D) ballistic deflection

If choice C is selected set score to 1.

44. 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.

45. In illustration D033DG below, what is the strake of shell plating indicated by letter H known as?

- (A) bilge strake
- (B) garboard strake
- (C) sheer strake
- (D) outboard keel plate

If choice B is selected set score to 1.

46. 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.

47. 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.

48. 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.

49. 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.

50. 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.

51. 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.

52. 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.

53. 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.

54. 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.

55. 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.

56. According to U.S. regulations which of the following statements is correct regarding the fuel oil containment around loading manifolds?

- (A) Containment drains are prohibited from leading to a common tank.
- (B) They may be fixed or portable, depending upon the age of the vessel.
- (C) The containment drains must have quick-closing valves to be closed in the event of leakage or failure of any part of the transfer connection.
- (D) All containment drains must lead to a common fixed drain tank.

If choice B is selected set score to 1.

57. What certificate verifies that a liquified gas tanker complies with the requirements with regard to their structure, equipment, fittings, arrangements, and materials?

- (A) Certificate for the Carriage of Noxious Liquid Substances
- (B) International Oil Prevention Certificate
- (C) Cargo Ship Safety Construction
- (D) Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk

If choice C is selected set score to 1.

58. 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.

59. 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.

60. The galley on your cargo vessel has an area of 2,500 square feet. What would fulfill the minimum requirements for fire protection?

- (A) One B-I extinguisher
- (B) One B-II extinguisher
- (C) One B-II and one C-II extinguisher
- (D) One B-V extinguisher

If choice B is selected set score to 1.

61. 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.

62. 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.

63. 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.

64. 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.

65. 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.

66. 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.

67. Limit switches, winches, falls, etc. must be thoroughly inspected at least every _____.

- (A) 2 months
- (B) 6 months
- (C) year
- (D) 4 months

If choice C is selected set score to 1.

68. 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.

69. The breaking strength of the service lines of the rockets used with an impulse-projected, rocket type line throwing appliances is _____.

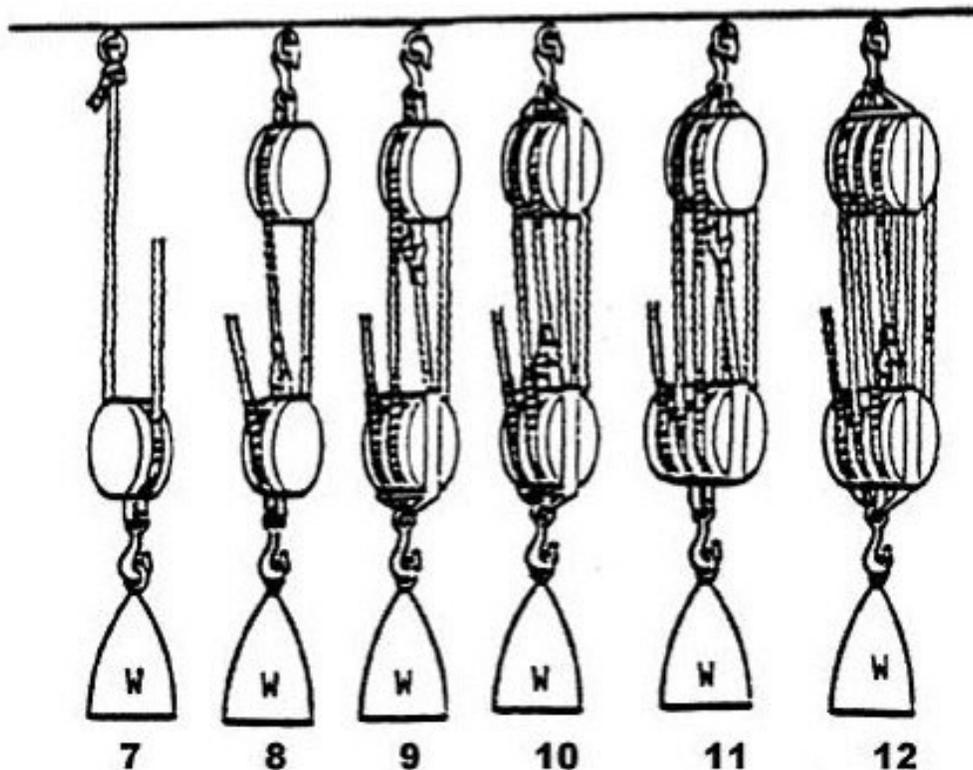
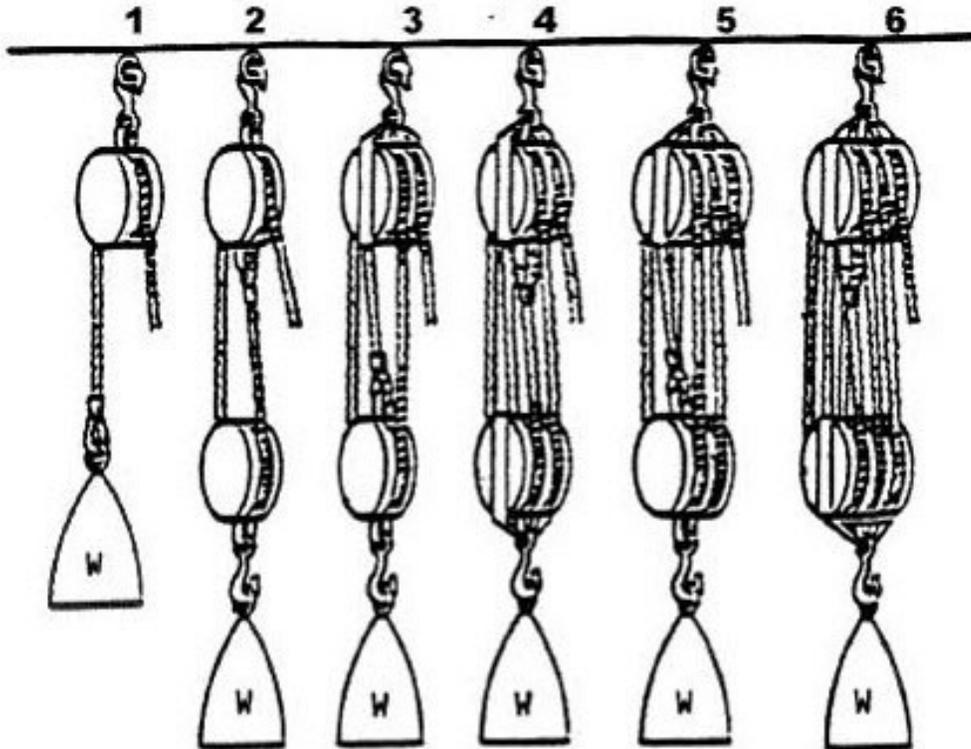
- (A) 300 lbs
- (B) 500 lbs
- (C) 1000 lbs
- (D) 1500 lbs

If choice B is selected set score to 1.

- 70.** Your vessel is proceeding up a channel, and you see a pair of range lights that are in line dead ahead. The chart indicates that the direction of this pair of lights is $093^{\circ}T$, and the variation is $6^{\circ}E$. If the heading of your vessel at the time of the sighting is 097° per standard magnetic compass, what is the correct deviation?
- (A) $5^{\circ}E$
 - (B) $10^{\circ}E$
 - (C) $5^{\circ}W$
 - (D) $10^{\circ}W$

If choice D is selected set score to 1.

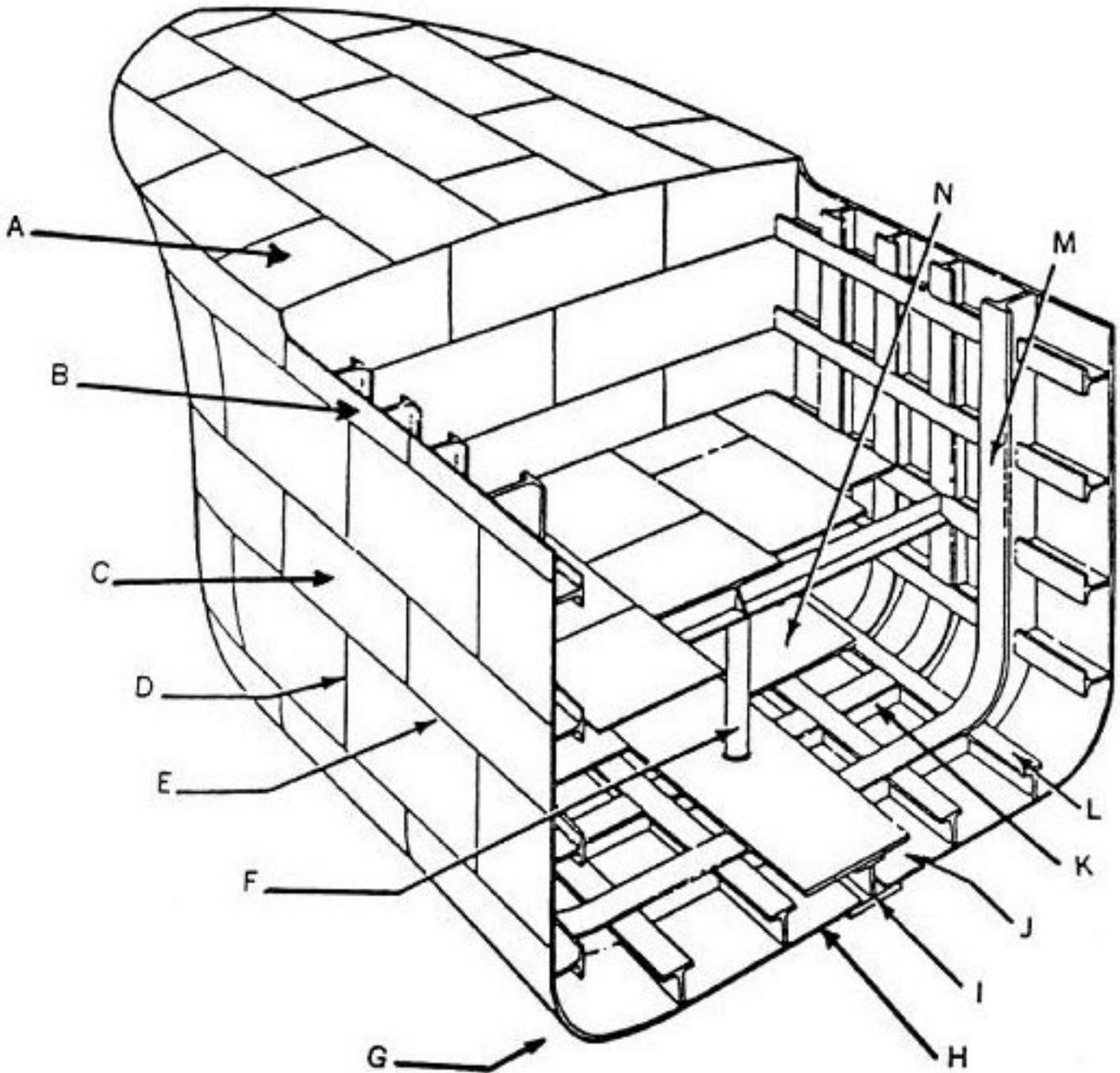
D029DG



Adapted for testing purposes only

Further reproduction prohibited without permission

D033DG



Adapted for testing purposes only

Further reproduction prohibited without permission

D041DG



1



2



3



4



5