

U.S.C.G. Merchant Marine Exam  
Mate of Unlimited Tonnage  
Q309 Deck Safety  
(Sample Examination)

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

1. Freeboard is measured from the upper edge of which item?

- A. The bulwark
- B. The deck line
- C. The sheer strake
- D. The gunwale bar

Correct answer: B

2. Where would the number 2 lifeboat on a tanker be located?

- A. Aft no.1 lifeboat starboard side
- B. The forwardmost boat on the starboard side
- C. The forwardmost boat on the port side
- D. Aft no.1 lifeboat port side

Correct answer: C

3. You are releasing carbon dioxide gas (CO<sub>2</sub>) into an engine compartment to extinguish a fire. In which situation will the CO<sub>2</sub> be most effective?

- A. The compartment is closed and ventilators are opened
- B. Air flow to the compartment is increased with blowers
- C. The compartment is left open to the air
- D. The compartment is closed and airtight

Correct answer: D

4. All personnel on board a vessel should be familiar with the rescue boat's \_\_\_\_\_.

- A. maintenance schedules
- B. boarding and operating procedure
- C. navigational systems
- D. fuel consumption rates

Correct answer: B

5. A seaman is reported missing in the morning and was last seen after coming off the mid-watch. Which type of turn would you use to return to the track-line steamed during the night?

- A. 180° turn
- B. Racetrack
- C. Williamson
- D. Anderson

Correct answer: C

6. You are on the beach and want to signal to a small boat in distress that your present location is dangerous and that they should land to the left. How would you indicate this?
- A. Fire a green star to the left
  - B. Send the code signal S followed by L
  - C. Send the letter K by light and point to the left
  - D. Place an orange signal to your left as you signal with a white light

Correct answer: B

7. An aircraft has indicated that he wants you to change course and follow him. You cannot comply because of an emergency on board. Which signal should you make?
- A. Make a round turn (360°) and resume course
  - B. Make an "S" turn (hard right then hard left) and resume course
  - C. Send the Morse signal "N" by flashing light
  - D. Fire a red flare at night or a red smoke signal by day

Correct answer: C

8. What is the primary hazard, other than fire damage, associated with a class C fire?
- A. Possibility of reflash
  - B. Electrocutation or shock
  - C. Flashover
  - D. Explosion

Correct answer: B

9. Using a sea anchor will accomplish which of the following?
- A. Reduce your drift rate
  - B. Aid in the maneuverability of the liferaft
  - C. Increase your visibility
  - D. Keep the liferaft from turning over

Correct answer: A

10. Which may ignite fuel vapors?
- A. Static electricity
  - B. Loose wiring
  - C. An open and running motor
  - D. All of the above

Correct answer: D

11. The carbon dioxide cylinders of a fixed fire extinguishing system may be located inside the protected space, if the quantity of CO<sub>2</sub> required to protect that space is not more than which amount?
- A. 300 pounds
  - B. 400 pounds
  - C. 500 pounds
  - D. 600 pounds

Correct answer: A

12. What is meant by the term "overhaul" in firefighting?
- A. Cover the fire with foam
  - B. Slow down the spread of fire by cooling adjacent structures
  - C. Smother the fire with a blanket or similar object
  - D. Break up solid objects to ensure that any deep-seated fires are extinguished

Correct answer: D

13. When rendering assistance to personnel in the water a SAR helicopter utilizes a rescue sling for most extractions. In which case would the use of a litter be preferred?
- A. When the person is suffering from fatigue
  - B. When the person has a pacemaker and static discharge is a concern
  - C. When the person is suffering from hypothermia
  - D. When the person is not trained in the use of the rescue sling

Correct answer: C

14. 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 week
  - B. Twice a year
  - C. Once a year
  - D. Once a month

Correct answer: D

15. You are at sea and have received a General Emergency message announcing the outbreak of war in Europe. You are directed to comply with the instructions in NGA (NIMA) PUB 117, Chapter Eight. Which statement is TRUE?
- A. You should attempt to coordinate with the Shipping Control Team
  - B. When over 200 miles from a port in the danger zone, you should not darken ship
  - C. You should only enter a port in the danger zone during hours of darkness
  - D. If on a coastwise voyage along the east coast of the U.S., you should put into the nearest port

Correct answer: A

16. If you have to jump in the water when abandoning ship, your legs should be in which position?

- A. Your legs should be in a kneeling position
- B. Your legs should be held as tightly against your chest as possible
- C. Your legs should be spread apart as far as possible
- D. Your legs should be extended straight down and crossed at the ankles

Correct answer: D

17. What is the normal percentage of oxygen in air?

- A. 16%
- B. 18%
- C. 21%
- D. 25%

Correct answer: C

18. What statement about immersion suits is TRUE?

- A. Any tear or leak will render the suit unserviceable and it must be replaced.
- B. During the annual maintenance, the front zipper should be lubricated using light machine oil or mineral oil.
- C. No stowage container for immersion suits may be capable of being locked.
- D. Immersion suits should be worn while performing routine work on deck.

Correct answer: C

19. How many ring life buoys should a 700 foot cargo vessel, not subject to SOLAS, navigating the Great Lakes carry?

- A. 12
- B. 14
- C. 18
- D. 24

Correct answer: B

20. The "inner bottom" is the \_\_\_\_\_.

- A. tank top
- B. space between two transverse bottom frames
- C. inner side of the vessel's shell
- D. compartment between the tank top and shell of the vessel

Correct answer: A

21. Which of the following aspects of a flooded space will most adversely affect transverse stability if it is subject to free communication?

- A. Completely flooded
- B. Off-center
- C. Open to the sea above and below the waterline
- D. On the centerline

Correct answer: B

22. Which is the most common type of davit found on ocean service merchant vessels today?

- A. Radial
- B. Gravity
- C. Quadrantal
- D. Sheath-screw

Correct answer: B

23. Which fuel is used in a survival craft's engine?

- A. Leaded gasoline
- B. Diesel oil
- C. Liquefied gas
- D. Unleaded gasoline

Correct answer: B

24. While you are working in a space, the fixed CO<sub>2</sub> system is accidentally activated. Which action should you take?

- A. Secure the applicators to preserve the charge in the cylinders
- B. Continue with your work as there is nothing you can do to stop the flow of CO<sub>2</sub>
- C. Retreat to fresh air and ventilate the compartment before returning
- D. Make sure all doors and vents are secured

Correct answer: C

25. On a passenger vessel, the vessel's name must appear on which item(s)?

- A. Lifeboat oars
- B. Lifeboats
- C. Ring life buoy
- D. All of the above

Correct answer: D

26. What is the purpose of a striking plate?

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

Correct answer: A

27. Which system is most likely to be subject to fading or static interference?

- A. VHF ARQ
- B. Digital Selective Calling on channel 70
- C. HF SITOR
- D. INMARSAT

Correct answer: C

28. When a helicopter is lifting personnel from an enclosed lifeboat, what should the other individuals in the boat do?
- A. Remain seated inside to provide body weight for stability
  - B. Remove their life preservers to prepare for their transfer to the helicopter
  - C. Stand on the outside of the boat to assist the person being lifted
  - D. Enter the water in case the person being lifted slips from the sling

Correct answer: A

29. You are underway in the Gulf of Mexico when you hear a distress message over the VHF radio. The position of the sender is about 20 miles south of Galveston, TX, and you are about 80 miles ESE of Galveston. What action should you take?
- A. Do not acknowledge receipt because you are too far away to take action
  - B. Immediately acknowledge receipt of the distress message
  - C. Do not acknowledge receipt until other ships nearer to the distress have acknowledged
  - D. Defer acknowledgment for a short interval so that a coast station may acknowledge receipt

Correct answer: D

30. What must be accurately determined to assess the potential for progressive flooding after a vessel has been damaged?
- A. The capacity of the water sprinkler systems
  - B. The operation of the machinery space bilge level alarms
  - C. The integrity of the watertight boundaries
  - D. All of the above

Correct answer: C

31. Recharging a previously used cartridge operated dry chemical extinguisher is accomplished by \_\_\_\_\_.
- A. replacing the propellant cartridge and refilling with powder
  - B. recharging the cartridge and refilling it with powder
  - C. authorized fire equipment servicing personnel only
  - D. puncturing the cartridge seal after installation

Correct answer: A

32. The distress message of a ship should include considerable information which might facilitate the rescue. Which is TRUE concerning the information?
- A. The information should be transmitted as a series of short messages, if time allows
  - B. The message must be sent to a Coast Guard station FIRST
  - C. The distress message shall include the vessel's draft
  - D. The information is ALWAYS included in the initial distress message and repeated as required

Correct answer: A

33. How should the letter "D" be pronounced when spoken on the radiotelephone?

- A. DA VID
- B. DOG
- C. DELL TAH
- D. DUKE

Correct answer: C

34. A high-velocity fog stream can be used in firefighting situations to drive heat and smoke ahead of the firefighters in a passageway. This technique should only be used when which condition exists?

- A. There is an outlet for the smoke and heat
- B. At least two fog streams can be used
- C. The fire is totally contained by the ship's structure
- D. Using a 2-1/2 inch hose

Correct answer: A

35. Which defines the function of a spark arrestor?

- A. Grounds static electricity reducing chance of explosion
- B. Utilized to secure covers on ullage openings
- C. It keeps sparks from falling into an open tank
- D. Prevents sparks from getting out of an engine's exhaust system

Correct answer: D

36. As a vessel sinks to a depth of 15 feet, the hydrostatic trip releases the liferaft container from its cradle by \_\_\_\_\_.

- A. releasing the tie-down strap
- B. releasing the CO2 canister
- C. pulling the operating cord
- D. breaking the weak link

Correct answer: A

37. If the OCMI has NOT granted an extension, how often are free-fall lifeboats required to be lowered into the water and launched with the assigned crew?

- A. 3 months
- B. 6 months
- C. 1 year
- D. 2 years

Correct answer: B

38. The operating cord on an inflatable liferaft also serves as which item?

- A. Drogue
- B. Lifeline
- C. Marker
- D. Painter

Correct answer: D



39. What is the function of the hand holds or straps on the underside of an inflatable liferaft?

- A. For crewmen to hang on to
- B. To hang the raft for drying
- C. To right the raft if it capsizes
- D. To carry the raft around on deck

Correct answer: C

40. The single turn method of returning to a man overboard should be used ONLY if which condition exists?

- A. The conning officer is inexperienced
- B. The man is reported missing rather than immediately seen as he falls overboard
- C. A boat will be used to recover the man
- D. The vessel is very maneuverable

Correct answer: D

41. What is the most important reason for taking anti-seasickness pills as soon as possible after entering a liferaft?

- A. Reduces appetite by decreasing nausea
- B. Prevents loss of body moisture due to vomiting
- C. Prevents impaired judgment due to motion-induced deliriousness
- D. To assist in sleeping

Correct answer: B

42. A crew member has just fallen overboard off your port side. Which action should you take?

- A. Wait until the stern is well clear of the man and then put the rudder over hard right.
- B. Immediately put the rudder over hard right.
- C. Immediately put the rudder over hard left.
- D. Immediately put the engines astern.

Correct answer: C

43. Which is an advantage of an ABC dry chemical over a carbon dioxide extinguisher?

- A. Lack of toxicity
- B. Greater multipurpose extinguishing ability
- C. Burn-back protection
- D. Less damage to electrical components

Correct answer: B

44. You are fighting a fire in the electrical switchboard in the engine room. You should secure the power, then take which action?

- A. Use a low-velocity fog adapter with the fire hose
- B. Use a portable CO2 extinguisher
- C. Use a portable foam extinguisher
- D. Determine the cause of the fire

Correct answer: B

45. Dry chemical extinguishers may be used on what class of fires?

- A. B and C only
- B. A only
- C. B only
- D. A, B or C as marked on the extinguisher

Correct answer: D

46. Which is an advantage of a dry chemical over a carbon dioxide fire extinguisher?

- A. Noncorrosive
- B. Greater discharge range
- C. Cleanliness
- D. All of the above

Correct answer: B

47. All lifeboats, rescue boats, and rigid-type liferafts shall be stripped, cleaned, and thoroughly overhauled at which time interval?

- A. 6 months
- B. Yearly
- C. 18 months
- D. Every two years

Correct answer: B

48. Where a propeller shaft passes through the hull, which device prevents water from entering the hull?

- A. Stop-water
- B. Sea cock
- C. Propeller boss
- D. Stuffing box

Correct answer: D

49. The most detrimental effect on initial stability is a result of liquids \_\_\_\_\_.

- A. pocketing in a slack tank as a vessel heels
- B. flowing from side to side within the vessel
- C. flowing in and out of a holed wing tank
- D. flowing from fore to aft within a vessel

Correct answer: C

50. Which type of EPIRB must each ocean-going ship carry?

- A. Class C
- B. Class B
- C. Class A
- D. Category 1

Correct answer: D

51. You are in a lifeboat broadcasting a distress message. What information would be essential to your rescuers?

- A. Number of persons aboard
- B. Your position by latitude and longitude
- C. The nature of the distress
- D. All of the above

Correct answer: D

52. Fires are grouped into what categories?

- A. Type 1, 2, 3, and 4
- B. Flammable solids, liquids, and gases
- C. Class A, B, C, and D
- D. Combustible solids, liquids, and gases

Correct answer: C

53. Which term is given to the maximum length allowed between main, transverse bulkheads on a vessel?

- A. Compartment standard
- B. Permissible length
- C. Floodable length
- D. Factor of subdivision

Correct answer: B

54. What should you do, following the launching of the survival craft, in an abandon ship scenario?

- A. Go in one direction until fuel runs out
- B. Plot a course for the nearest land
- C. Stay in the immediate area
- D. Take a vote on the direction in which to go

Correct answer: C

55. Which is TRUE of the spray of water in low-velocity fog?

- A. It will have greater range than high-velocity fog
- B. It will have greater range than a solid stream
- C. It will have about the same range as high-velocity fog
- D. It will have lesser range than high-velocity fog

Correct answer: D

56. Which term describes the strengthening of damaged bulkheads by using wood or steel?

- A. Battening
- B. Bracing
- C. Shoring
- D. Blocking

Correct answer: C

57. How can the spread of fire be prevented?

- A. Shutting off the oxygen supply
- B. Removing combustibles from the endangered area
- C. Cooling surfaces adjacent to the fire
- D. All of the above

Correct answer: D

58. Which type of portable fire extinguisher is NOT designed for use on flammable liquid fires?

- A. Dry chemical
- B. Carbon dioxide
- C. Water (cartridge-operated)
- D. Foam

Correct answer: C

59. In illustration D033DG below, what is the space indicated by the letter J known as?

- A. A flooding barrier
- B. The floor space
- C. The bilge tank
- D. The double bottom

Correct answer: D

60. What is the purpose of a bilge well?

- A. To collect water to be pumped out
- B. To provide a base line for sounding measurements
- C. To afford access to the shell through the double bottoms
- D. To provide access for the pneumericator

Correct answer: A

61. The wooden plug inserted in the vent of a damaged tank should be removed if you are going to \_\_\_\_\_.

- A. abandon ship
- B. use the crossover system
- C. fight a fire
- D. pump from the damaged tank

Correct answer: D

62. You are trying to rescue survivors from a wrecked vessel on fire. How should you make your approach?

- A. To leeward of the wrecked vessel
- B. To windward of the wrecked vessel
- C. At a speed of at most one-half that of the wrecked vessel
- D. At a speed of at least that of the wrecked vessel

Correct answer: B

63. Which types of portable fire extinguishers are designed for use on electrical fires?

- A. Dry chemical and soda-acid
- B. Carbon dioxide and foam (stored pressure)
- C. Foam (stored pressure) and soda-acid
- D. Dry chemical and carbon dioxide

Correct answer: D

64. You are picking up a conscious person that has fallen overboard in one of the vessels motorboats. Recovery is easier in a light breeze if you approach from which direction?

- A. Leeward with the victim to windward
- B. Approach with the wind on your starboard side
- C. Windward with the victim to leeward
- D. Approach with the wind on your port side

Correct answer: C

65. Channel 13 (156.65 MHz), the designated bridge-to-bridge channel, may NOT be used to \_\_\_\_\_.

- A. exchange navigational information between vessels
- B. conduct necessary tests
- C. exchange operating schedules with company dispatcher
- D. exchange navigational information between a vessel and a shore station

Correct answer: C

66. The vessel shown in illustration D025DG has broken down and you are going to take her in tow. The wind is coming from her starboard beam. You are making more leeway than she. Where should you position your vessel when you start running lines?

- A. A
- B. B
- C. C
- D. D

Correct answer: A

67. You have taken another vessel in tow. Which is an indicator that the towing speed is too fast?

- A. The vessels are not in step
- B. The tow line feels like it is "jumping" when touched
- C. The towed vessel goes "in irons"
- D. The catenary comes clear of the water

Correct answer: D

68. What is the lifesaving signal indicating "You are seen - Assistance will be given as soon as possible"?

- A. Firing of a green star signal
- B. Vertical motion of a white light or flare
- C. Vertical motion of white flags
- D. None of the above

Correct answer: D

69. Which of the following when removed will extinguish a fire?

- A. Oxygen
- B. Carbon dioxide
- C. Nitrogen
- D. Sodium

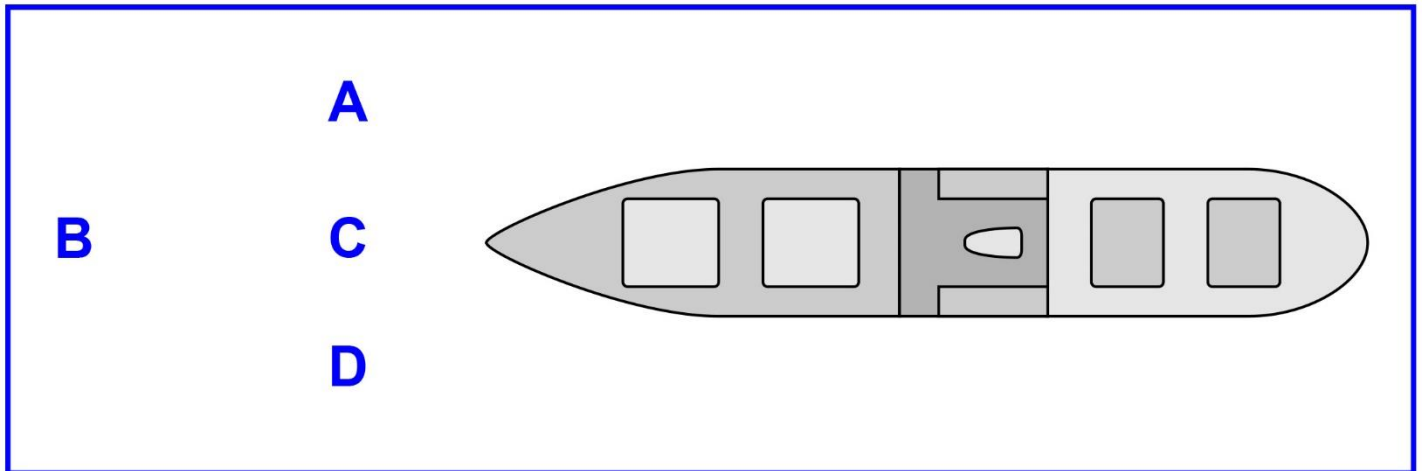
Correct answer: A

70. In illustration D033DG below, which letter indicates a longitudinal?

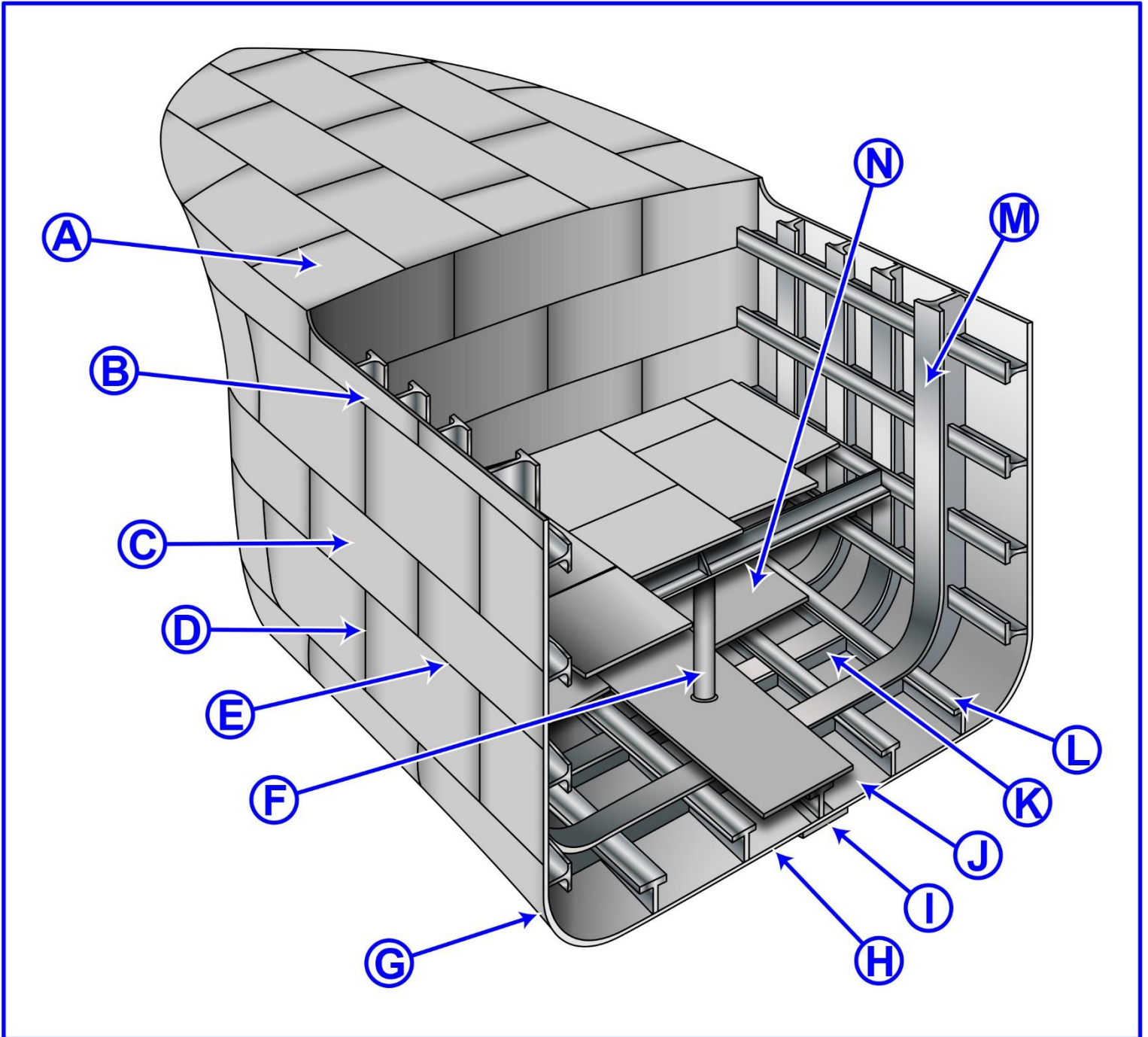
- A. C
- B. E
- C. M
- D. L

Correct answer: D

## D025DG



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