

U.S.C.G. Merchant Marine Exam
Master/Chief Mate Offshore Supply Vessels
Q201 Deck Safety
(Sample Examination)

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

1. Which statement is TRUE concerning the life buoy on your small passenger vessel? (Length 28 feet)
- A. Life buoys are not required to be fitted with lifelines
 - B. The life buoy(s) must be readily accessible
 - C. All life buoy(s) must be orange in color
 - D. The life buoy(s) must be tied securely to the vessel

Correct answer: B

2. To increase the extent of flooding your vessel can suffer without sinking, you could take which action?
- A. Ballast the vessel
 - B. Raise the center of gravity
 - C. Increase reserve buoyancy
 - D. Lower the center of gravity

Correct answer: C

3. Your vessel has been damaged and is partially flooded. The first step to be taken in attempting to save the vessel is to _____.
- A. pump out the water inside the vessel
 - B. calculate the free surface effect and lost buoyancy to determine the vessel's stability
 - C. establish flooding boundaries and prevent further spread of flood water
 - D. plug the hole(s) in the outer shell

Correct answer: C

4. For the purpose of training and drills, if reasonable and practicable, how frequently should rescue boats be launched with their assigned crew?
- A. Twice a year
 - B. Once a week
 - C. Once a year
 - D. Once a month

Correct answer: D

5. Which of the following describes the function of a sea anchor when utilized as a tool for beaching a lifeboat through surf?
- A. sea anchors are never deployed when beaching a survival craft
 - B. it can be used to steady the survival craft while the crew members disembark
 - C. it can be used to control the speed of a survival craft while maintaining the heading
 - D. it can be used to pull a survival craft ashore if deployed during an ebb tide

Correct answer: C

6. When the alarm bell sounds on a positive-pressure, self-contained breathing apparatus, how long will reserve air supply last?
- A. About 8-10 minutes
 - B. About 4-5 minutes
 - C. About 18-20 minutes
 - D. About 12-15 minutes

Correct answer: B

7. When a vessel is stationary and in a hogging condition, the main deck is under which stress?
- A. Racking stress
 - B. Tension stress
 - C. Compression stress
 - D. Shear stress

Correct answer: B

8. Your vessel has run aground and is touching bottom for the first one-quarter of its length. What is the LEAST desirable method from the standpoint of stability to decrease the bottom pressure?
- A. Flood an after double bottom tank
 - B. Pump out the forepeak tank
 - C. Shift deck cargo aft
 - D. Discharge forward deck cargo

Correct answer: B

9. The important initial stability parameter, GM, is which of the following?
- A. The metacentric height
 - B. The height of the metacenter above the keel
 - C. The height of the center of gravity above the keel
 - D. The height of the center of buoyancy above the keel

Correct answer: A

10. Your ship of 12,000 tons displacement has a center of gravity of 21.5 feet above the keel. You run aground and estimate the weight aground is 2500 tons. What would be the virtual rise in the center of gravity?
- A. 1.26 feet
 - B. 3.80 feet
 - C. 4.80 feet
 - D. 5.66 feet

Correct answer: D

11. What is the most useful drug to reduce a high fever?
- A. Paregoric
 - B. Aromatic spirits of ammonia
 - C. Aspirin
 - D. Bicarbonate of soda

Correct answer: C

12. The two factors which make underwater hull repair difficult are accessibility and which other factor?

- A. The shape of the hull
- B. The threat of progressive flooding
- C. The pressure exerted by the water
- D. The availability of tools

Correct answer: C

13. Small quantities of flammable liquids needed at a work site should be _____.

- A. used only under the supervision and direction of a ship's officer
- B. in a metal container with a tight cap
- C. tightly capped and stowed with other tools near the job site when securing at the end of the day
- D. used only when a pressurized fire hose is laid out ready for immediate use

Correct answer: B

14. In illustration D041DG below, which of the following is the symbol for the reference from which transverse measurements are made?

- A. 5
- B. 4
- C. 3
- D. 1

Correct answer: A

15. What is the purpose of the tricing pendants?

- A. They control the outboard swing of a lifeboat during lowering
- B. They control the fore and aft motion of a lifeboat during lowering
- C. They hold a lifeboat next to the embarkation deck while loading
- D. They provide suspensions for the manropes

Correct answer: C

16. What is the effect of heated intake air on a diesel engine that is at normal operating temperature?

- A. Increases engine horsepower
- B. Increases efficiency
- C. Reduces engine horsepower
- D. Increases engine life

Correct answer: C

17. Which signal is used by a rescue unit to indicate, "Avast hauling"?

- A. Firing of a green star signal
- B. An orange smoke signal
- C. Firing of a red star signal
- D. Three white star rockets fired at one-minute intervals

Correct answer: C

18. The shearing stresses on a ship's structure are usually greatest at which area?

- A. The ship's quarter-length points
- B. The stern
- C. The midships section
- D. The bow

Correct answer: A

19. You have a large, broken-down vessel in tow with a wire rope and anchor cable towline. Both vessels have made provision for slipping the tow in an emergency; however, unless there are special circumstances which is TRUE?

- A. The vessel towed should slip first
- B. The towing vessel should slip first
- C. They should slip simultaneously
- D. Either vessel may slip first

Correct answer: B

20. Which is TRUE concerning the most serious effect trapped air has on a diesel engine jacket water cooling system?

- A. Accelerates corrosion in the system
- B. Reduces the effectiveness of chromate additives
- C. Forms pockets of high chemical concentrates
- D. Accelerates formation of sludge deposits

Correct answer: A

21. When electrical equipment is involved in a fire, where should the stream of dry chemicals be directed?

- A. Shot off a flat surface onto the flames
- B. Used to shield against electrical shock
- C. Fogged above the equipment
- D. Aimed at the source of the flames

Correct answer: D

22. A deck-stowed 40-foot container is giving off smoke, and one end is discolored from heat. The cargo is valuable and easily damaged by water. You want to extinguish the fire without further damage if possible. What action should you take?

- A. Connect a portable line from the ship's fixed system and discharge CO₂ into the container.
- B. Pierce the container and discharge 6 or more portable CO₂'s then add more CO₂ hourly.
- C. Cool the exterior of the container with water and close all vents; then keep it cooled until it can be off-loaded.
- D. Flood the container with water and disregard any cargo damage as the fire threatens the entire vessel.

Correct answer: B

23. What shall be conducted during a fire and boat drill?
- A. Fire pumps shall be started and all exterior outlets opened.
 - B. All watertight doors in the vicinity of the drill shall be operated.
 - C. All lifeboat equipment shall be examined.
 - D. All of the above

Correct answer: B

24. Which satellite system promulgated Maritime Safety Information?
- A. AMVER
 - B. SafetyNET
 - C. NAVTEX
 - D. INMARSAT-M SES

Correct answer: B

25. You have taken another vessel in tow. Which is an indicator that the towing speed is too fast?
- A. The catenary comes clear of the water
 - B. The towed vessel goes "in irons"
 - C. The tow line feels like it is "jumping" when touched
 - D. The vessels are not in step

Correct answer: A

26. Which are the flammable limits of methyl ethyl ketone?
- A. 1.8% to 11.5%
 - B. 6.6% to 12.1%
 - C. 9.6% to 15.1%
 - D. 12.2% to 18.1%

Correct answer: A

27. What is the most probable cause of reduced capacity in a reciprocating air compressor?
- A. Leaking air valves
 - B. Faulty unloader
 - C. Plugged air cooler
 - D. Carbon on cylinder heads

Correct answer: A

28. The most detrimental effect on initial stability is a result of liquids _____.
- A. flowing from side to side within the vessel
 - B. pocketing in a slack tank as a vessel heels
 - C. flowing from fore to aft within a vessel
 - D. flowing in and out of a holed wing tank

Correct answer: D

29. Which system may be useful for messages, such as local storm warnings or a shore-to-ship distress alert, for which it is inappropriate to alert all ships in the satellite coverage area?
- A. AMVER
 - B. EGC
 - C. NAVTEX
 - D. DSC

Correct answer: B

30. Which quantity of fuel is required to be carried in a motor lifeboat?
- A. 55 gallons
 - B. The quantity needed for 24 hours continuous operation
 - C. 90 gallons
 - D. The quantity needed for 48 hours continuous operation

Correct answer: B

31. What does the term "beam of a vessel" refer to?
- A. The depth between decks
 - B. The internal cubic capacity
 - C. The width of the vessel
 - D. The molded depth of the vessel

Correct answer: C

32. When the handle of an all-purpose nozzle is pulled all the way back, it will _____.
- A. produce low-velocity fog
 - B. shut off the water
 - C. produce high-velocity fog
 - D. produce a straight stream

Correct answer: D

33. Great Lakes vessels, using liferafts, must have sufficient liferaft capacity on each side of the vessel to accommodate how many persons onboard?
- A. 150% of the crew
 - B. 100% of the persons on board
 - C. 50% of the persons on board
 - D. 100% of the persons normally assigned to those spaces

Correct answer: B

34. When using the rainwater collection tubes on a liferaft, what should be done with the first collection?
- A. It should be used to boil food
 - B. Passed around so all can drink their fill
 - C. It should be saved to be used at a later time
 - D. Poured overboard because of salt washed off the canopy

Correct answer: D

35. Distress signals may be _____.

- A. smoke signals
- B. red flares
- C. sound signals
- D. Any of the above

Correct answer: D

36. Your vessel is damaged, listing to port and on occasion flopping to the same angle to starboard. It has a long, slow, sluggish roll around the angle of list. There is excessive trim by the stern with little freeboard aft. What action should you take FIRST to correct this situation?

- A. Pump out the after peak and fill the forepeak to change the trim.
- B. Press up any slack double bottom tanks forward of the tipping center, then fill the forepeak if empty.
- C. Jettison any off-center topside weights to lower GM and correct the list.
- D. Pump out any slack after double bottom tanks to reduce free surface and increase freeboard aft.

Correct answer: B

37. The angular movement of a vessel about a horizontal line drawn from its bow to its stern is known by which term?

- A. Swaying
- B. Heaving
- C. Rolling
- D. Pitching

Correct answer: C

38. A ship station license for your radiotelephone is valid for which of the following terms?

- A. One year
- B. Two years
- C. Ten years
- D. The life of the vessel

Correct answer: C

39. When the height of the metacenter is the same as the height of the center of gravity, the metacentric height is equal to _____.

- A. zero
- B. the height of the metacenter
- C. half the height of the metacenter
- D. the height of the center of gravity

Correct answer: A

40. 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. If on a coastwise voyage along the east coast of the U.S., you should put into the nearest port
 - C. When over 200 miles from a port in the danger zone, you should not darken ship
 - D. You should only enter a port in the danger zone during hours of darkness

Correct answer: A

41. What power source actuates a solenoid valve?
- A. Mechanical force
 - B. Hydraulic pressure
 - C. Air pressure
 - D. Electric current

Correct answer: D

42. Which of the following describes the condition of Hypothermia?
- A. When the core body temperature drops to 38 degrees Celsius
 - B. Any instance when a person is emerged in water
 - C. When the rate of heat production in the body exceeds the rate of heat loss
 - D. When the rate of heat loss of the body exceeds the rate of heat production

Correct answer: D

43. The AMVER system for vessels in the Gulf of America is administered by which organization?
- A. Corps of Engineers
 - B. Minerals Management Service
 - C. U.S. Coast Guard
 - D. Department of Energy

Correct answer: C

44. Which statement is TRUE of a tender vessel?
- A. It has a large GM.
 - B. It has a very low center of gravity.
 - C. It has a good transverse stability.
 - D. Its period of roll is long.

Correct answer: D

45. What is one of the FIRST actions you should take after abandoning and clearing away from a vessel?
- A. Arrange watches and duties.
 - B. Prepare for arrival of rescue units.
 - C. Identify the person in charge.
 - D. Gather up useful floating objects.

Correct answer: C

46. What prevents water running along the shaft of a leaking centrifugal pump from entering the shaft bearing?

- A. Water flinger
- B. Lantern ring
- C. Shaft seal
- D. Drain hole

Correct answer: A

47. What quality of a diesel fuel is most significant for efficient combustion?

- A. Flash point
- B. Specific heat
- C. Viscosity
- D. Volatility

Correct answer: D

48. In illustration D033DG below, which letter indicates a butt?

- A. D
- B. J
- C. F
- D. E

Correct answer: A

49. You are approaching a ship that is broken down and are preparing to take her in tow. BEFORE positioning your vessel to pass the towline, which action should you take?

- A. Install chafing gear on the towline
- B. Have traveling lizards rigged to guide the towline while it is paid-out
- C. Secure the bitter end of the towing hawser to prevent loss if the tow is slipped
- D. Compare the rate of drift between the ships

Correct answer: D

50. What type of stern tube bearing has the least friction?

- A. Oil-lubricated bearings
- B. Lignum vitae
- C. Bronze bushings
- D. Hard rubber

Correct answer: A

51. A short ton is a unit of weight consisting of _____.

- A. 1,000 pounds
- B. 2,205 pounds
- C. 2,240 pounds
- D. 2,000 pounds

Correct answer: D

52. What will happen if cargo is shifted from the lower hold to the main deck on the vessel?

- A. The GM will increase
- B. The center of buoyancy will move downward
- C. The center of gravity will move upwards
- D. The center of buoyancy will move up

Correct answer: C

53. Which of the following defines the difference between the free-floating displacement and the KB of a grounded vessel?

- A. Transverse stability
- B. Reserve buoyancy
- C. Grounding force
- D. Inclining moment

Correct answer: C

54. Loading cargo above the vessel's center of gravity will increase the vessel's vertical center of gravity. How will this affect the vessel?

- A. If your vessel's stability is increasing, the rolling period will remain the same
- B. If your vessel's stability is decreasing, the roll period will increase
- C. If your vessel's stability is increasing, the rolling period will increase
- D. If your vessel's stability is decreasing, the rolling period will decrease

Correct answer: B

55. Which statement about AMVER reports is TRUE?

- A. Distress messages should be sent to the AMVER center.
- B. There are four different message reports in the AMVER system.
- C. In the body of the sailing plan report, the letter G is used to indicate a great circle course.
- D. The sailing plan may be sent in any reasonable time before departure, but not later than 12 hours after departure.

Correct answer: B

56. A fire in the radio transmitter would be of what class?

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

Correct answer: C

57. What are the symptoms of sugar diabetes?

- A. Elevated temperature
- B. Decreased appetite and thirst
- C. Gain in weight
- D. Increased appetite and thirst

Correct answer: D

58. Which extinguishing agent is most effective for combating wood fires?

- A. Water
- B. Dry chemical
- C. Carbon dioxide
- D. Dry powder

Correct answer: A

59. When should a tourniquet be used to control bleeding?

- A. To prevent bleeding from minor wounds
- B. Only with puncture wounds
- C. When the victim is unconscious
- D. When all other means have failed

Correct answer: D

60. If you are forced to abandon ship in a rescue boat, which action should you take?

- A. Head for the nearest land
- B. Vote on what to do, so all hands will have a part in the decision
- C. Remain in the immediate vicinity
- D. Head for the closest sea lanes

Correct answer: C

61. What is the purpose of the intake/exhaust valves in a diesel engine?

- A. They supply cooling water
- B. They synchronize the ignition spark
- C. They regulate the combustion cycle
- D. They supply and regulate the lubricant flow

Correct answer: C

62. Why should a person being treated for shock be wrapped in warm coverings?

- A. To preserve body heat
- B. To protect the person from injury during transportation
- C. To avoid self-inflicted wounds caused by spastic movement
- D. To increase body heat

Correct answer: A

63. By day, what is the signal meaning, "This is the best place to land"?

- A. A white star rocket
- B. Vertical motion of a red flag
- C. Vertical motion of a white flag or the arms
- D. A white smoke signal

Correct answer: C

64. What is the meaning of the signal "G1325"?

- A. The zone time is 1325.
- B. The longitude is 13°25'.
- C. The latitude is 13°25'.
- D. The GMT is 1325.

Correct answer: B

65. Which defines the function of a spark arrestor?

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

Correct answer: B

66. You hear the general alarm and ship's whistle sound for over 10 seconds. What does this signal mean?

- A. Dismissal from fire and emergency stations
- B. Abandon ship
- C. Fire and emergency
- D. Man overboard

Correct answer: C

67. There is a fire in the crew's quarters of your vessel. Which action should you take FIRST?

- A. Attempt to put the fire out yourself before sounding the alarm
- B. Prepare to abandon ship
- C. Close all ventilation to the quarters if possible
- D. Ventilate the quarters as much as possible

Correct answer: C

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

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

Correct answer: D

69. While underway in thick fog you are on watch and hear the cry "man overboard". Which type of maneuver should you make?

- A. figure eight turn
- B. Round turn
- C. Racetrack turn
- D. Williamson turn

Correct answer: D

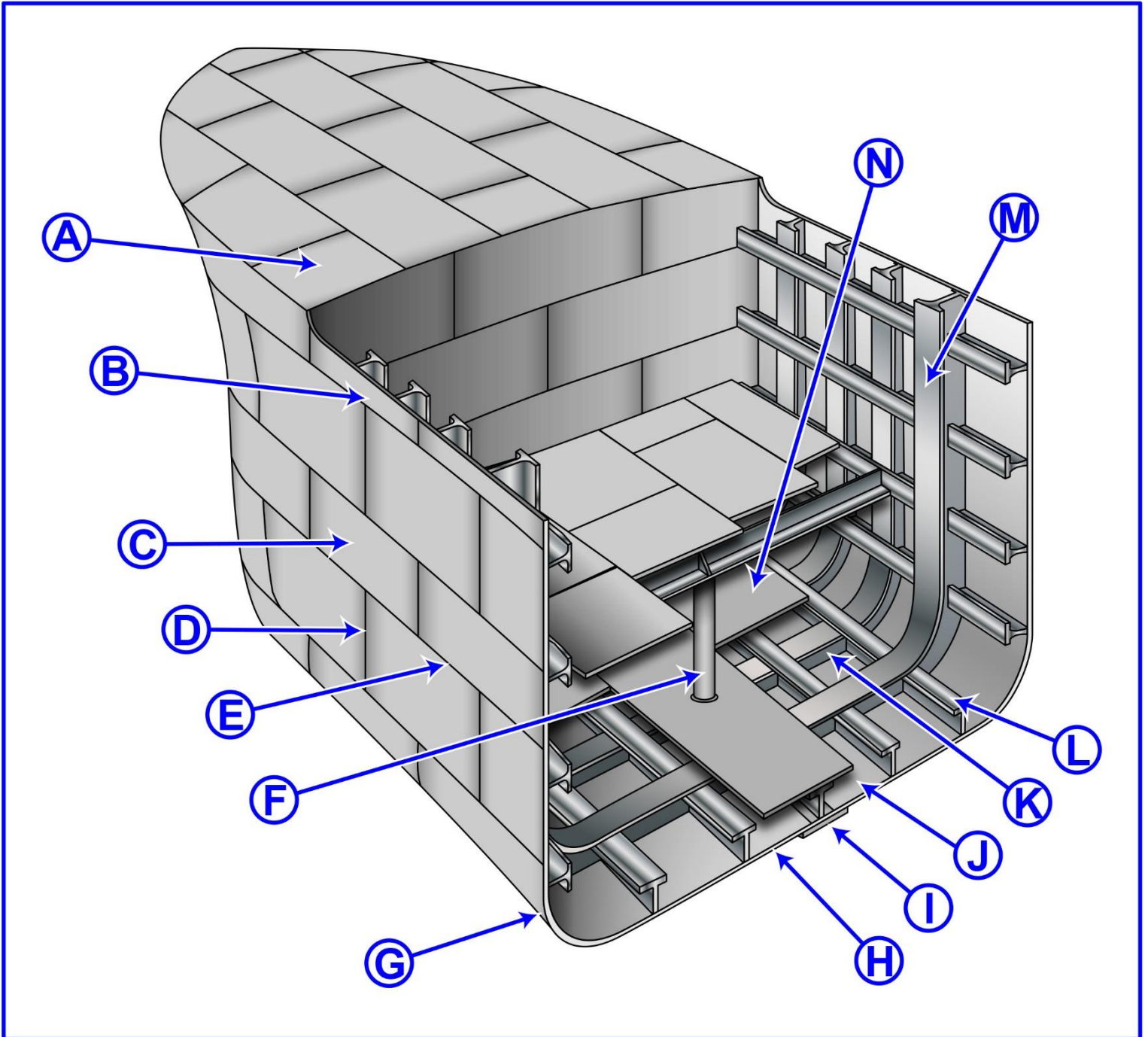
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70. Small hull leaks can be temporarily repaired by _____.

- A. seizing
- B. caulking
- C. parbuckling
- D. parceling

Correct answer: B

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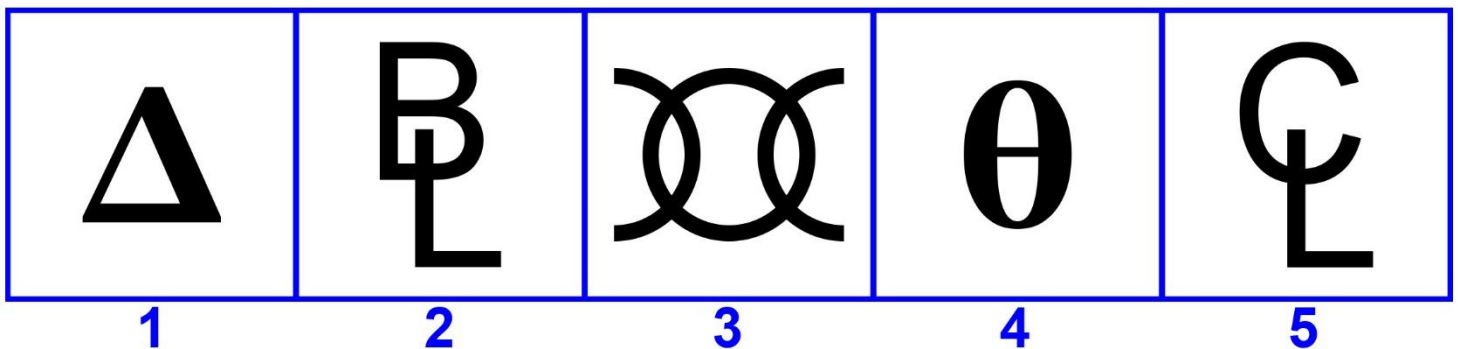


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