

U.S.C.G. Merchant Marine Exam

Mate Less than 500-1600 Gross Registered Tons Rivers

Q392 Navigation General – Rivers

(Sample Examination)

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

1. When is an air mass termed "warm"?

- A. If it originated in a low-pressure area
- B. If it originated in a high-pressure area
- C. If the mass is above 70°F
- D. If the ground over which it moves is cooler than the air

Correct answer: D

2. How is a safe water mark, that can be passed close aboard on either side, painted and lighted?

- A. Red and white stripes with a Morse (A) light
- B. Black and red stripes with a Morse (A) light
- C. Black and red stripes with an interrupted quick flashing light
- D. Black and white stripes with an interrupted quick flashing light

Correct answer: A

3. If your vessel must pass through a draw bridge during a scheduled closure period, what signal should you sound to request the opening of the draw?

- A. Five short blasts
- B. One prolonged blast followed by three short blasts
- C. Three short blasts
- D. One prolonged blast followed by one short blast

Correct answer: A

4. The light characteristic of flashing is used in the Aids to Navigation System on the Western Rivers. Which example is required to utilize this characteristic?

- A. Daymarks with no lateral significance
- B. Preferred channel buoys
- C. Lights marking the left descending bank
- D. Lights marking the right descending bank

Correct answer: D

5. What is the color scheme of navigational marks used for informational or regulatory purposes?

- A. Green and red horizontally-banded
- B. White with orange geometric shapes
- C. Solid yellow
- D. Red and white vertically-striped

Correct answer: B

6. Under the U.S. Aids to Navigation System on the Western Rivers, which describes the daymarks on the right descending bank?
- A. Red diamond-shaped panels with red reflector borders
 - B. Green triangular-shaped panels with green reflector borders
 - C. Red triangular-shaped panels with red reflector borders
 - D. Green square-shaped panels with green reflector borders

Correct answer: D

7. As a high-pressure system approaches, which is TRUE concerning the barometer reading?
- A. The reading stays the same
 - B. The reading falls
 - C. The reading falls rapidly
 - D. The reading rises

Correct answer: D

8. Which term is used to describe a generally circular low-pressure area?
- A. An anticyclone
 - B. A cold front
 - C. An occluded front
 - D. A cyclone

Correct answer: D

9. Which type of daymark is used to mark the starboard side of the channel when entering from sea?
- A. Black and white diamond
 - B. Red and white octagon
 - C. Red triangle
 - D. Green square

Correct answer: C

10. Which characteristic and color will a preferred-channel buoy show?
- A. A white light whose characteristic is Morse (A)
 - B. A composite group-flashing (2 + 1) red or green light
 - C. A composite group-flashing (2 + 1) white light
 - D. A group-occulting white light

Correct answer: B

11. When cold air displaces warm air you have which type of front?
- A. An occluded front
 - B. A stationary front
 - C. A cold front
 - D. A warm front

Correct answer: C

12. Which would influence a magnetic compass?

- A. Iron pipe
- B. Radio
- C. Electrical wiring
- D. All of the above

Correct answer: D

13. Which government agency publishes the U.S. Coast Pilot?

- A. National Geospatial-Intelligence Agency
- B. Army Corps of Engineers
- C. U.S. Coast Guard
- D. National Oceanic and Atmospheric Administration

Correct answer: D

14. Which type of fog occurs on clear nights with very light breezes and forms when the earth cools rapidly?

- A. Frontal fog
- B. Advection fog
- C. Convection fog
- D. Radiation fog

Correct answer: D

15. Sometimes foreign charts are reproduced by NGA. On such a chart a wire dragged (swept) area may be shown in purple or which other color?

- A. Magenta
- B. Yellow
- C. Red
- D. Green

Correct answer: D

16. While upbound through Memphis, the weather report on the TV news indicates that a cold front will cross western Kentucky and Tennessee the next morning. What weather should accompany this front?

- A. Overcast with steady, light rain or drizzle
- B. Light, southerly winds; high humidity and possibly fog
- C. Gusting winds shifting to the northwest with thunderstorms
- D. Scattered clouds with light to moderate southeasterly winds and possibly fog

Correct answer: C

17. Under the U.S. Aids to Navigation System used on the Western Rivers, which is TRUE of the aids to navigation lights on the right descending bank?

- A. They can only be green lights
- B. They are white or green lights
- C. They can only be white lights
- D. They are white or red lights

Correct answer: B

18. Which publication lists Class I and II private aids to navigation in or along navigable waters of the United States?

- A. Sailing Directions
- B. Aids to Navigation Manual
- C. Light List
- D. List of Private Aids

Correct answer: C

19. Fog forms when the air temperature is at or below _____.

- A. the dew point
- B. the wet bulb temperature
- C. the dry bulb temperature
- D. 32°F

Correct answer: A

20. Which defines the controlling depth of the river?

- A. The least available water in a channel which limits the draft of boats and tows
- B. The minimum depth of the river prescribed in the channel maintenance program
- C. The edge of a dredged channel
- D. The highest level to which the river may rise without flooding

Correct answer: A

21. On a nautical chart, what does the inner ring of a compass rose indicate?

- A. Deviation
- B. True directions
- C. Magnetic directions
- D. Compass error

Correct answer: C

22. In many areas "atoll" clouds (clouds of vertical development) are produced over small islands. What causes the development of these clouds?

- A. Descending air over the islands
- B. Cool land air mixing with warm sea air
- C. Warm air from the sea rising over higher land areas
- D. Rising air currents produced by the warm islands

Correct answer: D

23. White and orange buoys, if lighted, show which color light?

- A. Alternating yellow and white
- B. Red
- C. White
- D. Orange

Correct answer: C

24. On an isomagnetic chart, which term is used for the line of zero variation?

- A. A variation line
- B. The zero variation line
- C. An agonic line
- D. An isogonic line

Correct answer: C

25. Which type of precipitation occurs only in thunderstorms with strong convection currents that convey raindrops above and below the freezing level?

- A. Hail
- B. Sleet
- C. Rime
- D. Freezing rain

Correct answer: A

26. Which term is used to describe a structure, usually made of stone, or cement pilings, which extends from the bank at approximately right angles to the current?

- A. Cutoff
- B. Crib
- C. Dike
- D. Revetment

Correct answer: C

27. A green buoy has a yellow triangle on it. What type of buoy is this?

- A. This buoy that is off-station and is marked to warn mariners of its wrong position
- B. It is a buoy that was set in error and will be replaced with a red nun buoy
- C. This is an information or regulatory buoy that has lateral significance
- D. It is a dual-purpose marker used where the ICW and other waterways coincide

Correct answer: D

28. As your vessel is heading southward along the east coast of the United States, you encounter a buoy showing a red flashing light. How should you pass this buoy?

- A. Pass it about 50 yards off on either side
- B. Pass it well clear on either side
- C. Leave it to your starboard
- D. Leave it to your port

Correct answer: C

29. In the IALA Buoyage System, what do buoys with alternating red and green horizontal bands indicate?

- A. An isolated danger
- B. Fishing areas
- C. Spoil grounds
- D. The preferred channel

Correct answer: D

30. How is an occluded front represented on a weather map?

- A. An alternate red and blue line
- B. A blue line
- C. A purple line
- D. A dashed blue line

Correct answer: C

31. You are underway and pass by a lighthouse. Its light, which was white since you first sighted it, changes to red. What does this indicate?

- A. That you have entered an area of shoal water or other hazard
- B. The lighthouse has lost power and has switched to emergency lighting
- C. It is the identifying light characteristic of the lighthouse
- D. The light is characterized as alternately flashing

Correct answer: A

32. The channel under a bridge is marked with lights of the lateral system. The centerline of the channel shall be marked on the bridge in which manner?

- A. Three fixed white lights
- B. A yellow light
- C. An occulting white light
- D. A flashing blue light

Correct answer: C

33. What does a Doppler log in the bottom return mode indicate?

- A. The speed over the ground
- B. The bottom characteristics
- C. The depth of the water
- D. The velocity of the current

Correct answer: A

34. A section of the river that is narrower than usual and is often navigable from bank to bank is a _____.

- A. chute
- B. navigable pass
- C. stabilized channel
- D. slough

Correct answer: A

35. While upbound through Memphis, the weather report on TV news indicates that a warm front is stationary over Kentucky - Missouri - Tennessee areas. What weather conditions should you expect?

- A. Light winds from the northeast with clear skies
- B. Strong, gusting winds from the northwest with thundershowers
- C. A "blue norther"
- D. Southerly winds with steady rain; fog or overcast

Correct answer: D

36. Deviation is the angle between the _____.

- A. true meridian and the magnetic meridian
- B. true meridian and the axis of the compass card
- C. magnetic meridian and the axis of the compass card
- D. axis of the compass card and the degaussing meridian

Correct answer: C

37. You are steaming southward along the west coast of the United States when you sight a buoy showing a flashing green light. How should you pass this buoy?

- A. Leave it to your starboard
- B. Leave it to your port
- C. Pass it on either side but well clear of it
- D. Pass it close aboard on either side

Correct answer: A

38. Which is a characteristic of a port side daymark?

- A. Of any shape
- B. Octagonal
- C. Numbered
- D. Black and white

Correct answer: C

39. Relative humidity is the percentage of water vapor that is in the air as compared to the maximum amount it can hold at _____.

- A. a specific wing speed
- B. a specific temperature
- C. a specific barometric pressure
- D. any time

Correct answer: B

40. In United States waters, a buoy having red and white vertical stripes if lighted, it will have which light characteristic?

- A. Interrupted quick flashing
- B. Morse (A)
- C. Group occulting
- D. Quick flashing

Correct answer: B

41. Illustration D037NG below represents a movable dam. If there is high water and the wickets are down so that there is an unobstructed navigable pass through the dam, what light(s) will be shown at B if the lock walls and piers are not awash?

- A. Two red lights
- B. One amber light
- C. One red light
- D. Three red lights

Correct answer: D

42. What does the shoreline on charts generally represent?

- A. The mean low water line
- B. The mean high-water line
- C. The mean low water spring line
- D. The mean tide level

Correct answer: B

43. Which instrument is used to measure the relative humidity of the air?

- A. A hydrometer
- B. A barograph
- C. A hygrometer
- D. A spectrometer

Correct answer: C

44. A current moving across a lock entrance toward the river or toward the dam is known by which term?

- A. Cutoff
- B. Outdraft
- C. Springpool
- D. Lockwash

Correct answer: B

45. Under the U.S. Aids to Navigation System on the Western Rivers, what color are the buoys marking the starboard side of the channel when going upstream?

- A. Red
- B. Green
- C. Black
- D. Yellow

Correct answer: A

46. Which is TRUE concerning privately maintained aids to navigation included in the Light List?

- A. Not permitted in or along first-class waterways and may be authorized for second- and third-class waterways
- B. They must be conspicuously marked by a signboard with the words "PRIVATE AID"
- C. They are painted white and must use a white light if lighted
- D. They must conform to the standards of the U.S. Aids to Navigation System

Correct answer: D

47. You have been informed that dredging operations may be underway in your vicinity. Which buoy indicates the dredging area?

- A. Yellow and black vertically striped buoy
- B. Yellow buoy
- C. White buoy with a green top
- D. White and international orange buoy

Correct answer: B

48. When using a recording depth finder in the open ocean, what phenomena is most likely to produce a continuous trace that may not be from the actual ocean bottom?

- A. Echoes from a deep scattering layer
- B. Multiple returns reflected from the bottom to the surface and to the bottom again
- C. Poor placement of the transducer on the hull
- D. Echoes from schools of fish

Correct answer: A

49. A weather forecast states that the wind will commence veering. In the Northern Hemisphere, what changes will occur?

- A. The wind will continue blowing from the same direction
- B. The wind will increase in velocity
- C. The wind will shift in a counterclockwise manner
- D. The wind will shift in a clockwise manner

Correct answer: D

50. You sight a buoy fitted with a double-sphere topmark. If sighted at night, what color and light sequence would you expect to see?

- A. A flashing red light showing a group of three flashes
- B. A flashing white light showing a group of two flashes
- C. A quick-flashing green light
- D. A quick-flashing red light

Correct answer: B

D037NG

