

U.S.C.G. Merchant Marine Exam

Master Less than 500-1600 Gross Registered Tons Rivers

Q388 Navigation General – Rivers

(Sample Examination)

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

1. What publication has information on the climate, distances, navigation regulations, outstanding landmarks, channels and anchorages of Long Island Sound?
- A. Pilot Chart
 - B. Coast Pilot
 - C. Light List
 - D. Sailing Directions

Correct answer: B

2. Which type of cloud is the classic "thunderhead"?
- A. Cumulonimbus
 - B. Altostratus
 - C. Stratus
 - D. Cirrus

Correct answer: A

3. When outbound from a U.S. port, what does a buoy displaying a flashing red light indicate?
- A. A wreck to be left on the vessel's starboard side
 - B. A sharp turn in the channel to the right
 - C. The port side of the channel
 - D. A junction with the preferred channel to the left

Correct answer: C

4. The symbol which appears beside a light on a chart reads "Gp Fl R (2) 10 sec 160 ft 19M". Which characteristic describes the light?
- A. It has a radar reflector.
 - B. Its distinguishing number is "19M".
 - C. It is visible 10 miles.
 - D. None of the above

Correct answer: D

5. At which location is the value of sixty nautical miles per degree of geodetic latitude most correct?
- A. At either of the poles
 - B. The equator
 - C. At all latitudes
 - D. At latitude 45°

Correct answer: D

6. What is the function of a red triangular daymark?
- A. To mark a prominent object of navigational interest
 - B. To indicate the starboard side of a channel
 - C. To mark an area of a channel where crossing is permitted
 - D. To mark the centerline of a navigable channel

Correct answer: B

7. A current moving across a lock entrance toward the river or toward the dam is known by which term?
- A. Outdraft
 - B. Lockwash
 - C. Springpool
 - D. Cutoff

Correct answer: A

8. Which is TRUE concerning the points on the earth's surface where the magnetic dip is 90°?
- A. The points are connected by the isoclinical line
 - B. The points are located at the isopors
 - C. The points are located at the magnetic poles
 - D. The points are along the magnetic equator

Correct answer: C

9. Who should be consulted for changing conditions of controlling depths in major channels?
- A. National Ocean Service
 - B. U.S. Army Corps of Engineers
 - C. U.S. Coast Guard
 - D. National Geospatial-Intelligence Agency

Correct answer: B

10. Under the U.S. Aids to Navigation System, what does a lighted buoy with a spherical topmark mark indicate?
- A. The position of underwater cables
 - B. A hazard to navigation
 - C. Safe water
 - D. The port side of the channel

Correct answer: C

11. An orange and white buoy marking an area where operating restrictions are in effect will be marked with which symbol?
- A. Rectangle
 - B. Diamond with a cross
 - C. Open-faced diamond
 - D. Circle

Correct answer: D

12. You are approaching a lock and see a flashing amber light located on the lock wall. Which action should you take?

- A. Hang off your tow on the lock wall
- B. Stand clear of the lock entrance
- C. Enter the lock as quickly as possible
- D. Approach the lock under full control

Correct answer: D

13. Which is a characteristic of warm air masses?

- A. Heavy precipitation
- B. Good visibility
- C. Stratiform clouds
- D. Turbulence within the mass

Correct answer: C

14. Which defines the controlling depth of the river?

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

Correct answer: B

15. How do preferred channel buoys indicate the preferred channel to transit?

- A. The color of their top band
- B. The buoy's light rhythms
- C. Odd or even numbers
- D. The location of the buoy in the channel junction

Correct answer: A

16. Which weather element cannot be measured accurately while on board a moving vessel?

- A. Visibility
- B. Temperature
- C. Wind direction
- D. Atmospheric pressure

Correct answer: A

17. What is TRUE concerning new editions of Light Lists?

- A. New editions are corrected through the date shown on the title page.
- B. New editions are published by the National Ocean Service.
- C. Supplements to new editions are issued monthly by the U.S. Coast Guard.
- D. None of the above

Correct answer: A

18. What is the standard atmospheric pressure as measured in inches of mercury?

- A. 29.92
- B. 500.0
- C. 760.0
- D. 1013.2

Correct answer: A

19. You are approaching the first of two drawbridges that span a narrow channel. The second drawbridge is close to the first. Which signals should you sound?

- A. Sound the request-for-opening signal for the first bridge only, who will notify the second bridge of your approach
- B. Sound the request-for-opening signal and, after the bridge acknowledges it, sound the request-for-opening signal for the second bridge.
- C. Sound the request-for-opening signal twice in succession to indicate you must pass through both bridges
- D. Sound the request-for-opening signal, pause for about 10 seconds, then sound two prolonged blasts.

Correct answer: B

20. In the U.S. Aids to Navigation System on the Western Rivers, the light characteristic of group flashing (2) is used for which purpose?

- A. To mark the left descending bank
- B. To indicate the preferred channel
- C. To indicate daymarks with no lateral significant
- D. To mark the right descending bank

Correct answer: A

21. A drawbridge may use visual signals to acknowledge a vessel's request to open the draw. Which signal indicates that the draw will NOT be opened immediately?

- A. A white flag raised and lowered vertically
- B. A flashing white light
- C. A flashing amber light
- D. A fixed red light

Correct answer: D

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

Correct answer: B

23. Brief, violent showers frequently accompanied by thunder and lightning are usually associated with _____.

- A. stationary high-pressure systems
- B. winds shifting counterclockwise in the Northern Hemisphere
- C. passage of a cold front
- D. passage of a warm front

Correct answer: C

24. Which is the reference datum used in determining the heights of land features on most charts?

- A. Mean high water
- B. Mean sea level
- C. Half-tide level
- D. Mean low water

Correct answer: A

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

Correct answer: C

26. What are the colors of a mid-channel daymark?

- A. Red and white
- B. Black and red
- C. Green and red
- D. Green and white

Correct answer: A

27. Which term is used to describe a generally circular low-pressure area?

- A. An anticyclone
- B. A cyclone
- C. An occluded front
- D. A cold front

Correct answer: B

28. Which fog is produced by warm moist air passing over a cold surface?

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

Correct answer: C

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

Correct answer: C

30. What does a white buoy with an orange circle marked on it indicate?

- A. A mooring buoy
- B. Danger
- C. Operating restrictions are in effect
- D. Vessels are excluded from the area

Correct answer: C

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

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

Correct answer: D

32. Under the U.S. Aids to Navigation System, which category is a yellow buoy?

- A. A cardinal mark
- B. A junction buoy
- C. A safe water buoy
- D. A special mark

Correct answer: D

33. The dew point is reached when which condition occurs?

- A. The atmospheric pressure is 14.7 lbs. per square inch
- B. The temperature of the air equals the temperature of the seawater
- C. The air becomes saturated with water vapor
- D. The relative humidity reaches 50%

Correct answer: C

34. Which daymark has no lateral significance?

- A. Square; top half green and bottom half red
- B. Green square
- C. Black and white diamond
- D. Red triangle

Correct answer: C

35. Which term describes a tow that is properly aligned to pass through a narrow opening between two bridge piers or any other critical navigational maneuver?

- A. Holding on
- B. In shape
- C. Headed fair
- D. On course

Correct answer: B

36. Which of the symbols shown in illustration D018NG below represents a warm front?

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

Correct answer: C

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

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

Correct answer: D

38. The vertical component of the Earth's magnetic field causes induced magnetism in vertical soft iron. This changes with latitude. What corrects for this coefficient of the deviation?

- A. Quadrantal soft iron spheres
- B. Bar magnets in the binnacle
- C. The heeling magnet
- D. The Flinders bar

Correct answer: D

39. On the Mississippi and Ohio Rivers, there is a special type of fog known as steam fog. What conditions cause this fog?

- A. Rain coming out of a warm air mass aloft
- B. A rapid cooling of the ground on a clear night
- C. Cold air passing over much warmer water
- D. Warm air passing over much colder water

Correct answer: C

40. Under the IALA-B Buoyage System, which is TRUE of a conical buoy?

- A. The buoy is red in color
- B. The buoy is numbered with an odd number
- C. The buoy should be left to port when entering from seaward
- D. All of the above

Correct answer: A

41. In modern fathometers, what produces the sonic or ultrasonic sound waves?

- A. A transceiver
- B. An amplifier
- C. A generator
- D. A transducer

Correct answer: D

42. Where are buoys and day beacons exhibiting a yellow triangle or square painted on them used?

- A. On isolated stretches of the ICW to mark undredged areas
- B. Only at particularly hazardous turns of the channel
- C. Locations where the ICW and other waterways coincide
- D. In minor harbors where the controlling depth is 10 feet (3 meters) or less

Correct answer: C

43. Barometers are calibrated at which standard temperature?

- A. 0°F
- B. 32°F
- C. 60°F
- D. 70°F

Correct answer: B

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

Correct answer: C

45. Which is TRUE of Radiation fog?

- A. It always forms over water
- B. It dissipates during the evening
- C. It is thinnest at the surface
- D. It is formed by a temperature inversion

Correct answer: D

46. A backlash below a lock is defined as _____.

- A. a current setting your vessel on the wall
- B. a current setting into the lock chamber
- C. a current setting counter-clockwise
- D. an eddy working along the lower guide wall

Correct answer: D

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

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

Correct answer: B

48. Which agency publishes the Light Lists?

- A. United States Coast Guard
- B. Army Corps of Engineers
- C. National Ocean Service
- D. Oceanographic Office

Correct answer: A

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

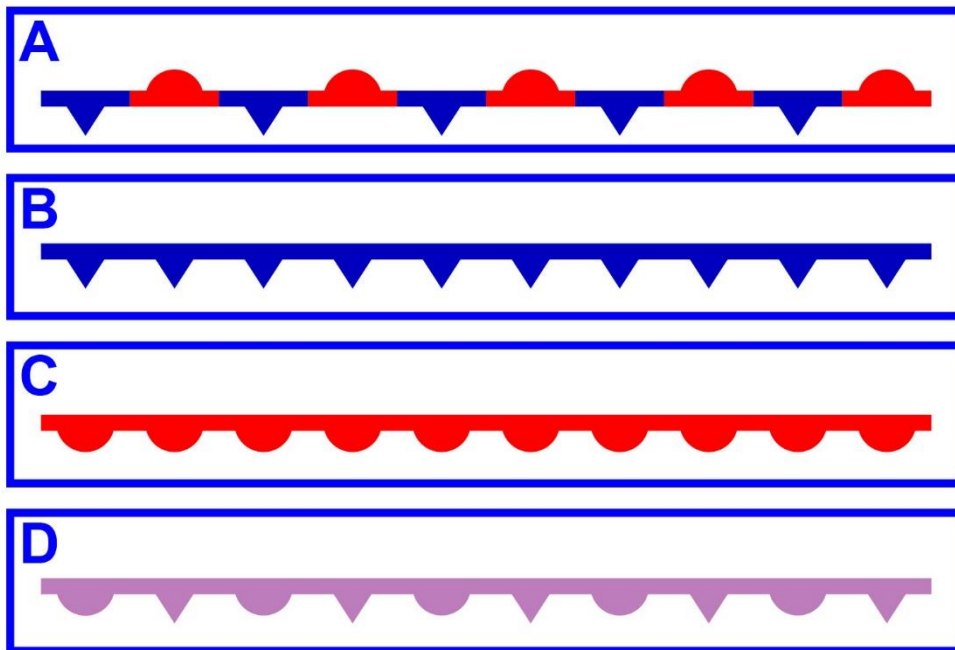
Correct answer: C

50. If your vessel were proceeding up river (ascending), how is the port side of the channel marked according to the U. S. Aids to Navigation System on the Western Rivers?

- A. Green can buoys
- B. Red can buoys
- C. Green nun buoys
- D. Red nun buoys

Correct answer: A

D018NG



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