

U.S.C.G. Merchant Marine Exam

Master or Mate Less than 200 Gross Registered Tons

Q397 Navigation General - Rivers

(Sample Examination)

Choose the best answer to the following Multiple Choice Questions.

1. The National Oceanic and Atmospheric Administration publishes which item?

- (A) Light Lists
- (B) Sailing Directions
- (C) Coast Pilots
- (D) pilot charts

If choice C is selected set score to 1.

2. What is a sling psychrometer used to measure?

- (A) The engine temperature
- (B) The sea water temperature
- (C) The dry bulb and wet bulb temperatures
- (D) The barometric pressure

If choice C is selected set score to 1.

3. What does a slow rise in the barometric pressure forecast?

- (A) High seas
- (B) Rainy weather for the next 48 hours
- (C) Deteriorating weather conditions
- (D) Improving weather conditions

If choice D is selected set score to 1.

4. Which topmark shown in illustration D023NG below identifies an isolated danger?

- (A) A
- (B) B
- (C) C
- (D) D

If choice B is selected set score to 1.

5. If an observer in the Northern Hemisphere faces the surface wind, where is the center of low pressure located?

- (A) To the right, and slightly behind
- (B) To the left, and slightly in front
- (C) To the right, and slightly in front
- (D) To the left, and slightly behind

If choice A is selected set score to 1.

6. On navigational aids, what does the light characteristic "FI (2+1)" mean?

- (A) A light showing groups of two or more flashes at regular intervals
- (B) Light flashes combined in groups, with a different number of flashes in each group
- (C) A flashing light combined with a fixed light of greater brightness
- (D) A fixed light varied at regular intervals by groups of two or more flashes of greater brightness

If choice B is selected set score to 1.

7. 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 nun buoys
- (B) Red nun buoys
- (C) Red can buoys
- (D) Green can buoys

If choice D is selected set score to 1.

8. When entering from seaward, what does a buoy displaying a composite group (2+1) flashing red light indicate?

- (A) A wreck to be left on the vessel's port side
- (B) A junction with the preferred channel to the left
- (C) A sharp turn in the preferred channel to the right
- (D) The starboard side of the secondary channel

If choice B is selected set score to 1.

9. In which situation is the light characteristic of composite group flashing (2 + 1) used in the Aids to Navigation System on the Western Rivers?

- (A) Only to identify the left descending bank
- (B) On preferred-channel buoys
- (C) Only to identify the right descending bank
- (D) On daymarks with no lateral significance

If choice B is selected set score to 1.

10. Yellow lights may appear on which buoys?

- (A) Spherical buoys
- (B) Horizontally-banded buoys
- (C) Vertically-striped buoys
- (D) Special purpose buoys

If choice D is selected set score to 1.

11. When a buoy is in position only during a certain period of the year, where may the dates when the buoy is in position be found?

- (A) Coast Pilot
- (B) Light List
- (C) On the chart
- (D) Notice to Mariners

If choice B is selected set score to 1.

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

If choice A is selected set score to 1.

13. You are approaching a drawbridge and must pass through during a scheduled closure period. What signal should you sound?

- (A) Three prolonged blasts
- (B) Three short blasts, two prolonged blasts
- (C) Two prolonged, two short blasts
- (D) Five short blasts

If choice D is selected set score to 1.

14. What color is a triangular daymark?

- (A) Red and white
- (B) Red
- (C) Green
- (D) Green and white

If choice B is selected set score to 1.

15. 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) Echoes from schools of fish
- (D) Poor placement of the transducer on the hull

If choice A is selected set score to 1.

16. A mid-channel buoy, may show which light?

- (A) A flashing red light
- (B) An occulting green light
- (C) A Morse (A) white light
- (D) A fixed red light

If choice C is selected set score to 1.

17. In which source could you find the vertical clearance of a bridge on the Ohio River?

- (A) Notice to Mariners
- (B) Coast Pilot of the Gulf of Mexico
- (C) Great Lakes Pilot
- (D) Light List of the Mississippi River System

If choice D is selected set score to 1.

18. When does a Doppler speed log indicate speed over ground?

- (A) When the unit is in the volume reverberation mode
- (B) The unit can only sense speed over ground when there is no current
- (C) When sensing the bottom in depths of less than 600 feet
- (D) At all times

If choice C is selected set score to 1.

19. Safe water buoys may show ONLY which type of light?

- (A) white lights
- (B) yellow lights
- (C) flashing green lights
- (D) flashing red lights

If choice A is selected set score to 1.

20. What is the term used for the horizontal angle between the magnetic meridian and the north-south line axis line of the magnetic compass?

- (A) Dip
- (B) Variation
- (C) Compass error
- (D) Deviation

If choice D is selected set score to 1.

21. An orange and white buoy with a rectangle on it displays what information?

- (A) directions
- (B) distances
- (C) locations
- (D) All of the above

If choice D is selected set score to 1.

22. What type of clouds are associated with a cold front?

- (A) Altostratus and fracto-cumulus
- (B) Cirrus and cirrostratus
- (C) Cumulus and cumulonimbus
- (D) Altostratus and cirrus

If choice C is selected set score to 1.

23. What does the expression "the air is saturated" mean?

- (A) The vapor pressure is at its maximum for the prevailing temperature
- (B) The cloud cover is 100%
- (C) The relative humidity is 100%
- (D) The precipitation has commenced

If choice C is selected set score to 1.

24. Under the IALA-B Buoyage System, when entering from seaward, a buoy that should be left to port will be which color?

- (A) Green
- (B) Yellow
- (C) Black
- (D) Red

If choice A is selected set score to 1.

25. Which describes a deadhead?

- (A) A crew member who refuses to work
- (B) A tree or log awash in a nearly vertical position
- (C) A buoy that is adrift
- (D) The upstream end of a land wall

If choice B is selected set score to 1.

26. While passing through Memphis, the weather report on the TV news indicates that a cold front is crossing western Kentucky and Tennessee. Tomorrow's weather will be dominated by a high pressure area. What weather should you expect tomorrow?

- (A) Low overcast; mild temperatures with light, steady rain or drizzle
- (B) Moderate winds from the northwest, clear visibility and cooler temperatures
- (C) Light, southerly winds; high humidity and possibly fog
- (D) Scattered clouds with light, southeasterly winds; high humidity and possible fog

If choice B is selected set score to 1.

27. You are approaching a vertical lift bridge. How do you know when the span is fully open?

- (A) A red light starts to flash at about 60 times a minute
- (B) A range of two green lights under the lift span are lit
- (C) Three white lights in a vertical line are lit
- (D) A yellow light is illuminated on the bridge pier

If choice B is selected set score to 1.

28. Information markers, when lighted, will display which color light?

- (A) Yellow lights
- (B) Green lights
- (C) Red lights
- (D) White lights

If choice D is selected set score to 1.

29. At which location is the value of sixty nautical miles per degree of geodetic latitude most correct?

- (A) At latitude 45°
- (B) At all latitudes
- (C) The equator
- (D) At either of the poles

If choice A is selected set score to 1.

30. The following types of vessels are awaiting lockage on the upper Mississippi. Which type of vessel is normally passed through the lock first?

- (A) Pleasure craft
- (B) Commercial towboats
- (C) Commercial passenger vessels
- (D) Commercial fishing vessels

If choice C is selected set score to 1.

31. In illustration D039NG below, what type of cloud is indicated by the number one?

- (A) Nimbostratus
- (B) Altocumulus
- (C) Cirrus
- (D) Altostratus

If choice C is selected set score to 1.

32. You are sailing south on the Intracoastal Waterway (ICW) when you sight a red nun buoy with a yellow square painted on it. Which of the following is TRUE?

- (A) You should leave the buoy on your port hand.
- (B) The yellow square is in error and it should be a yellow triangle.
- (C) The yellow is retro-reflective material used to assist in sighting the buoy at night.
- (D) This buoy marks the end of the ICW in that geographic area.

If choice A is selected set score to 1.

33. 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 white lights
- (B) They are white or red lights
- (C) They are white or green lights
- (D) They can only be green lights

If choice C is selected set score to 1.

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

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

If choice C is selected set score to 1.

35. While on watch, you notice that the air temperature is dropping and is approaching the dew point. Which type of weather should be forecasted?

- (A) Heavy rain
- (B) Sleet
- (C) Fog
- (D) Hail

If choice C is selected set score to 1.

36. What do chart legends printed in capital letters indicate about the associated landmark?

- (A) It is a government facility or station
- (B) The landmark has a radio transmitter
- (C) The landmark is conspicuous
- (D) The landmark is inconspicuous

If choice C is selected set score to 1.

37. Which condition(s) is (are) necessary for the formation of dew?

- (A) Available nuclei in the air
- (B) Clear skies
- (C) Moderate winds
- (D) A surface warmer than the dew point of the air

If choice B is selected set score to 1.

38. Ascending and descending air masses with different temperatures is part of an important heat transmitting process in our atmosphere. Which term is given to this process?

- (A) Convection
- (B) Barometric inversion
- (C) Radiation
- (D) Conduction

If choice A is selected set score to 1.

39. Which is TRUE of a lateral system buoy displaying a quick flashing light?

- (A) The buoy should be passed close aboard on either side
- (B) The buoy is painted with red and white vertical stripes
- (C) The buoy is used at a channel bifurcation or junction
- (D) The buoy indicates that special caution is required

If choice D is selected set score to 1.

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

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

If choice A is selected set score to 1.

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

- (A) chute
- (B) stabilized channel
- (C) navigable pass
- (D) slough

If choice A is selected set score to 1.

42. Which is a feature of a special daymark?

- (A) A green square
- (B) A red-and-white octagon
- (C) A daymark with a yellow stripe on it
- (D) A yellow diamond

If choice D is selected set score to 1.

43. Under the U.S. Aids to Navigation System on the Western Rivers, which is TRUE of a daymark on the right descending bank?

- (A) It will have an odd number
- (B) Must contain yellow retro-reflective markings
- (C) It shall be green in color
- (D) It will indicate the gage reading

If choice C is selected set score to 1.

44. Which would you expect to see on a lighted preferred-channel buoy?

- (A) A Morse (A) white light
- (B) A composite group-flashing light
- (C) A fixed red light
- (D) A yellow light

If choice B is selected set score to 1.

45. Which is TRUE of a bluff bar?

- (A) Bluff bars tend to give a false indication of its position
- (B) A bluff bar is perpendicular to the current
- (C) A bluff bar has a sharp drop off into deep water
- (D) It is a bar extending out from a bluff alongside the river

If choice C is selected set score to 1.

46. Which measurement uses mean high water as the reference plane?

- (A) All vertical measurements on charts
- (B) Soundings on the East and West Coasts
- (C) Water depths on the East Coast only
- (D) Heights above water of land features such as lights

If choice D is selected set score to 1.

47. Which term defines a submerged dike extending from the bank of the river used to train the channel?

- (A) A wingdam
- (B) A towhead
- (C) A cutoff
- (D) A landwall

If choice A is selected set score to 1.

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

- (A) A cold front
- (B) An occluded front
- (C) A cyclone
- (D) An anticyclone

If choice C is selected set score to 1.

49. By convention, the Earth's south magnetic pole is which color?

- (A) Black
- (B) Blue
- (C) White
- (D) Red

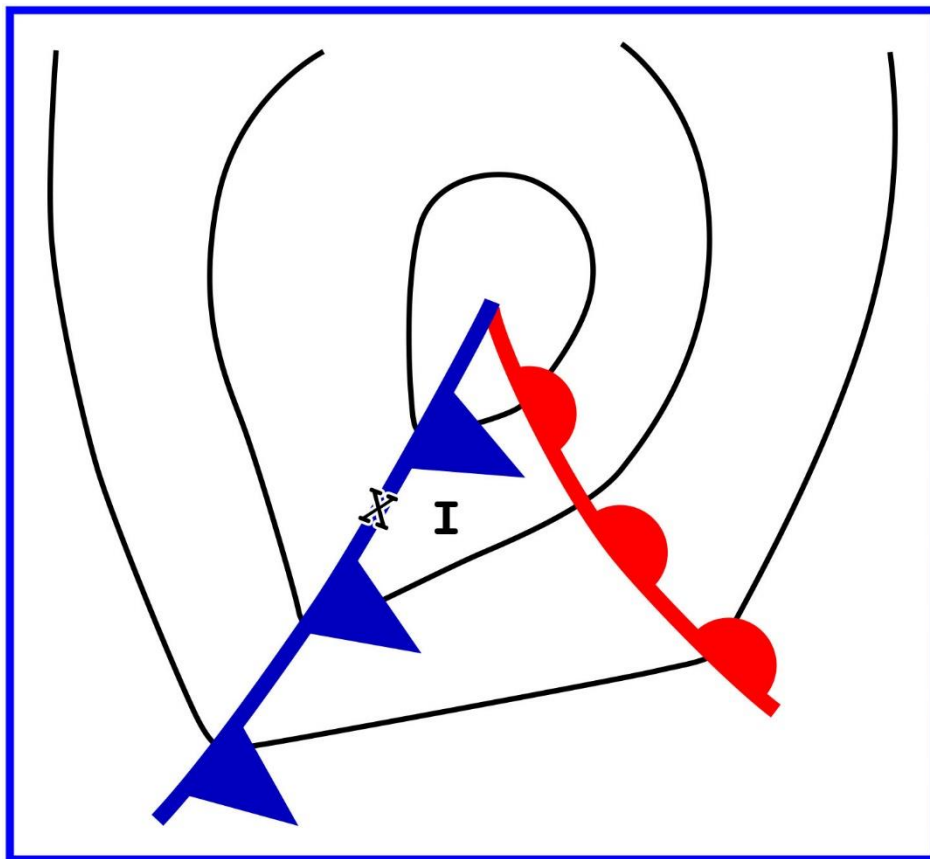
If choice D is selected set score to 1.

50. Your vessel is located at position I on the weather map in illustration D013NG below. You should experience which weather condition?

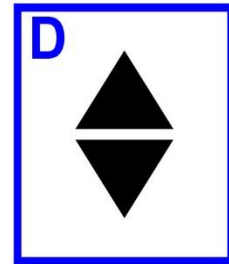
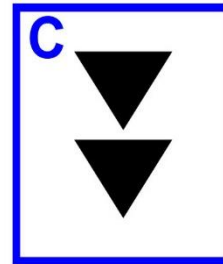
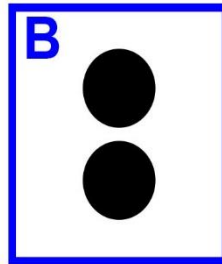
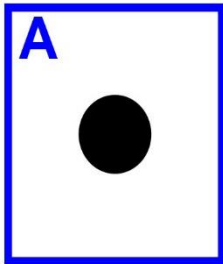
- (A) Overcast skies with rising temperature
- (B) Steady precipitation
- (C) Clear skies with warm temperatures
- (D) Thundershowers

If choice D is selected set score to 1.

D013NG

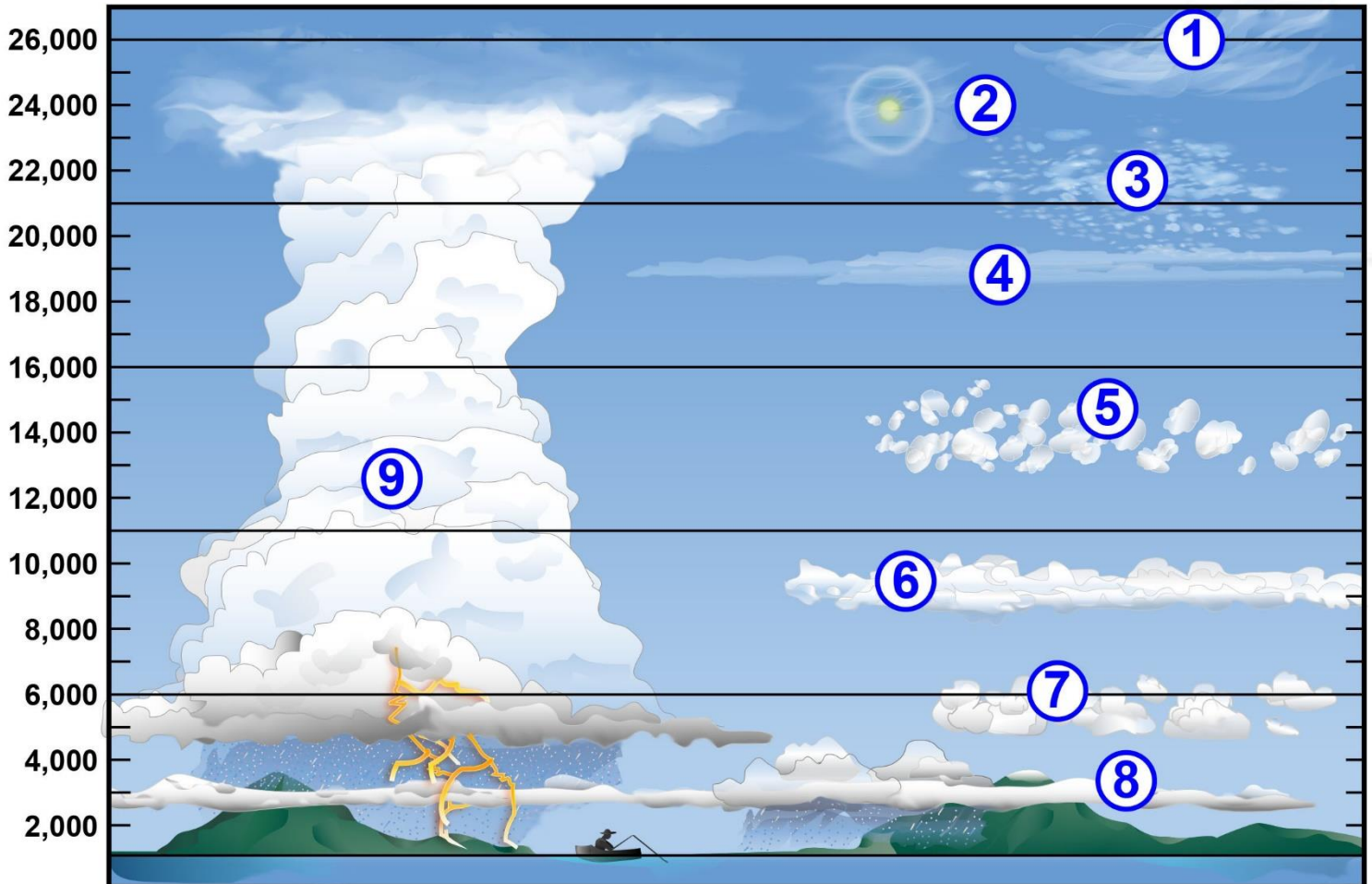


D023NG



D039NG

Altitude (in feet)



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