

U.S.C.G. Merchant Marine Exam
Master Uninspected Fishing Vessels
Q182 Navigation General – Near Coastal
(Sample Examination)

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

1. What is a system of reservoirs and connecting tubes in a gyro compass called?

- A. The rotor
- B. The spider element
- C. The mercury ballistics
- D. The gyrotron

Correct answer: C

2. The shoreline shown on nautical charts of areas affected by large tidal fluctuations is usually the line of mean _____.

- A. low water
- B. tide level
- C. high water
- D. lower low water

Correct answer: C

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

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

Correct answer: C

4. In the Northern hemisphere which semicircle of a hurricane is the navigable semicircle?

- A. Right
- B. Back
- C. Front
- D. Left

Correct answer: D

5. What is the difference between magnetic heading and compass heading called?

- A. Drift
- B. Compass error
- C. Deviation
- D. Variation

Correct answer: C

6. While taking weather observations, you determine that the wind is coming from the west. In the weather log, how would you record the wind direction?
- A. 000°
 - B. 090°
 - C. 180°
 - D. 270°

Correct answer: D

7. Which is TRUE of a preferred-channel buoy?
- A. They are spherical
 - B. They show a white light
 - C. They may be lettered
 - D. All of the above

Correct answer: C

8. Which cloud is described as a low, dark, sheet-like cloud which is associated with continuous precipitation for many hours?
- A. Cumulus cloud
 - B. Nimbostratus cloud
 - C. Cumulonimbus cloud
 - D. Cirrus cloud

Correct answer: B

9. A magnetic compass card is marked in how many degrees?
- A. 90
 - B. 180
 - C. 360
 - D. 400

Correct answer: C

10. As you enter a U.S. channel from seaward, which is TRUE concerning the numbers on the buoys?
- A. increase with the can buoys being even numbered
 - B. increase in channels going to the north or west, and decrease in channels going to the south or east
 - C. increase with the can buoys being odd numbered
 - D. decrease with the can buoys being even numbered

Correct answer: C

11. When do neap tides occur?
- A. At a new or full Moon
 - B. When the Sun, Moon, and Earth are in line
 - C. When the Moon is at quadrature
 - D. At approximately 28-day intervals

Correct answer: C

12. Which type of cloud is hail most likely to fall from?

- A. Cumulus
- B. Altocumulus
- C. Cumulonimbus
- D. Nimbostratus

Correct answer: C

13. Under the IALA Buoyage System, which topmark shown in illustration D023NG below will be displayed on a safe watermark?

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

Correct answer: A

14. Which item in illustration D034NG below shows a flashing light?

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

Correct answer: C

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

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

Correct answer: A

16. You have replaced the chart paper in the course recorder. Which statement is TRUE?

- A. Test the electrical gain to the thermograph pens
- B. Set the zone pen to the far right of the paper
- C. Adjust the chart paper to indicate GMT
- D. Line the course pen up on 0-degree mark

Correct answer: C

17. You are plotting a running fix in an area where there is a determinable current. How should this current be treated in determining the position?

- A. The current should be ignored.
- B. The set should be applied to the second bearing.
- C. The course and speed made good should be determined and used to advance the LOP.
- D. The drift should be added to the ship's speed.

Correct answer: C

18. What is a common unit of measure for atmospheric pressure?

- A. Inches
- B. Tons
- C. Degrees
- D. Cubic Feet

Correct answer: A

19. A mooring buoy, if lighted, shows which color light?

- A. White
- B. Any color except red or green
- C. Blue
- D. Yellow

Correct answer: A

20. Lines drawn through points on the Earth having the same atmospheric pressure are known by which term?

- A. Isothermal
- B. Isobars
- C. Seismics
- D. Millibars

Correct answer: B

21. The path that a vessel is expected to follow, represented on a chart by a line drawn from the point of departure to the point of arrival, is known by which term?

- A. DR plot
- B. Estimated course
- C. Heading
- D. Track line

Correct answer: D

22. According to Buys Ballot's law, when an observer in the Northern Hemisphere experiences a northwest wind, where is the center of low pressure located?

- A. Northwest of the observer
- B. Northeast of the observer
- C. South-southeast of the observer
- D. West-southwest of the observer

Correct answer: B

23. Your vessel is on course 180°T speed 22 knots. The apparent wind is from 70° off the port bow, speed 20 knots. What are the true direction and speed of the wind?

- A. 45°T, 21.0 knots
- B. 51°T, 24.0 knots
- C. 58°T, 21.2 knots
- D. 64°T, 26.0 knots

Correct answer: B

24. Which light characteristic may be used on a special mark?

- A. Occulting
- B. Quick flashing
- C. Equal interval
- D. Flashing

Correct answer: D

25. You are underway in the North Sea on course 216°T when you sight a buoy bearing 021° relative. Under the IALA Buoyage System, you are in the best navigable water if the buoy has which of the following characteristics?

- A. Has a double cone topmark with both points up
- B. Has a light characteristic of Q(6) + L Fl 15s
- C. Is horizontally banded yellow, black, yellow
- D. Has a continuous very quick light

Correct answer: B

26. Illustration D011NG below represents the geographic location of a vessel and the radar presentation at the same time. Which statement is TRUE?

- A. Ship No. 2 is not detected due to the reflective mass of the background mountain overpowering the ship's reflective signals.
- B. Ship No. 1 is not detected due to the shadow effect of the headland.
- C. The small island is not detected due to the effect of beam width.
- D. A tangent bearing of the headland to the south-southeast should be corrected by adding one-half of the beam width.

Correct answer: D

27. You are on course 222°T and take a relative bearing of a lighthouse of 025°. What is the true bearing to the lighthouse?

- A. 315°
- B. 247°
- C. 197°
- D. 335°

Correct answer: B

28. In the Northern Hemisphere you are caught in the dangerous semicircle of a storm with plenty of sea room available. Which is the best course of action to take?

- A. Put the wind on the vessel's port quarter and make as much headway as possible
- B. Put the wind on the vessel's port bow and make as much headway as possible
- C. Put the wind on the vessel's starboard quarter and make as much headway as possible
- D. Put the wind on the vessel's starboard bow and make as much headway as possible

Correct answer: D

29. Which is TRUE concerning Hot air?

- A. The moisture content of air is independent of air temperature
- B. Hot air retains the same amount of moisture as cold air
- C. Hot air holds more moisture than cold air
- D. Hot air holds less moisture than cold air

Correct answer: C

30. Which is the region containing 3/4 of the mass of the atmosphere and to which are confined such phenomena as clouds, storms, precipitation and changing weather conditions?

- A. The tropopause
- B. The stratopause
- C. The troposphere
- D. The stratosphere

Correct answer: C

31. What agency of the U.S. Government issues charts of U.S. waters and Coast Pilots?

- A. U.S. Naval Observatory
- B. National Imagery and Mapping Agency
- C. U.S. Coast Guard
- D. National Oceanic and Atmospheric Administration

Correct answer: D

32. A chart has extensive corrections to be made to it. When these are made and the chart is again printed, what term is given to this chart issue?

- A. New edition
- B. First edition
- C. Revised edition
- D. Reprint

Correct answer: A

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

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

Correct answer: B

34. Pressure gradient is a measure of _____.

- A. a high-pressure area
- B. pressure difference over time
- C. vertical pressure variation
- D. pressure difference over horizontal distance

Correct answer: D

35. In the Northern Hemisphere, swells that have outrun the storm are produced in which location?

- A. In the right front quadrant of the right semicircle
- B. In the after section of the left semicircle
- C. In the rear of the left semicircle
- D. In the left front quadrant of the right semicircle

Correct answer: A

36. Which describes the level of database information which cannot be removed from the ECDIS display and consists of information which is required at all times in all geographic areas and under all circumstances?

- A. Display base information
- B. System electronic nautical chart
- C. Chart display information
- D. Standard display information

Correct answer: A

37. While steering a course of 150°T , you wish to observe the Sun for a speed check. What would the azimuth have to be?

- A. 150°T
- B. 090°T
- C. 060°T
- D. 240°T

Correct answer: A

38. Geographic range is the maximum distance at which a light may be seen under which conditions?

- A. Existing visibility conditions, limited only by the intensity of the light
- B. Permitting visibility conditions, limited only by the curvature of the Earth
- C. Permitting visibility conditions, limited only by interference from background lighting
- D. Existing visibility conditions, limited only by the curvature of the Earth

Correct answer: B

39. How may a spherical buoy be identified?

- A. It may be green
- B. It may be numbered
- C. It may be red
- D. It may be lettered

Correct answer: D

40. You take a bearing of 191° and 313° to two objects. Which bearing of a third object will give the best fix?

- A. 001°
- B. 069°
- C. 209°
- D. 356°

Correct answer: B

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

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

Correct answer: C

42. The velocity of a rotary tidal current will be decreased when the Moon is at which phase?

- A. New
- B. Full
- C. Apogee
- D. Perigee

Correct answer: C

43. Which is a characteristic of the weather preceding an approaching warm front?

- A. Clearing skies
- B. Steadily falling barometric pressure
- C. Gusty winds
- D. Decreasing relative humidity

Correct answer: B

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

- A. Coast Pilots
- B. Sailing Directions
- C. Pilot charts
- D. Light Lists

Correct answer: A

45. If the current and wind are in opposite directions, what does the sea surface indicate?

- A. The surface indicates a greatly reduced wind speed
- B. The surface indicates a lower wind speed than what really exists
- C. The surface indicates a higher wind speed than what really exists
- D. The surface does not change, each cancels the other

Correct answer: C

46. Which is the most important information to be obtained from a barometer?

- A. The weather indications printed on the dial (such as "cold, wet, etc.") under the pointer
- B. The difference between the reading of the two pointers, which shows wind direction
- C. The last two figures of the reading of the pointer, such as .87, .76, or .92
- D. The present reading of the pressure, combined with the changes in pressure observed in the recent past

Correct answer: D

47. You sight a spar buoy with the topmark shown in illustration D027NG below. You must take which of the following actions?

- A. Pass to the east of the buoy
- B. Pass to the south of the buoy
- C. Pass to the north of the buoy
- D. Keep well clear of the buoy and pass on either side

Correct answer: D

48. The Light List shows that a navigational light has a nominal range of 17 miles and a height above water of 28 feet (8.5 meters). Your height of eye is 32 feet (9.8 meters) and the visibility is 11.0 miles. At what approximate range will you first sight the light?

- A. 11.0 miles
- B. 12.8 miles
- C. 15.7 miles
- D. 18.0 miles

Correct answer: B

49. Which radar control reduces weak echoes out to a limited distance from the ship?

- A. The receiver gain control
- B. The fast time constant (differentiator)
- C. The sensitivity time control (sea-clutter control)
- D. The brilliance control

Correct answer: C

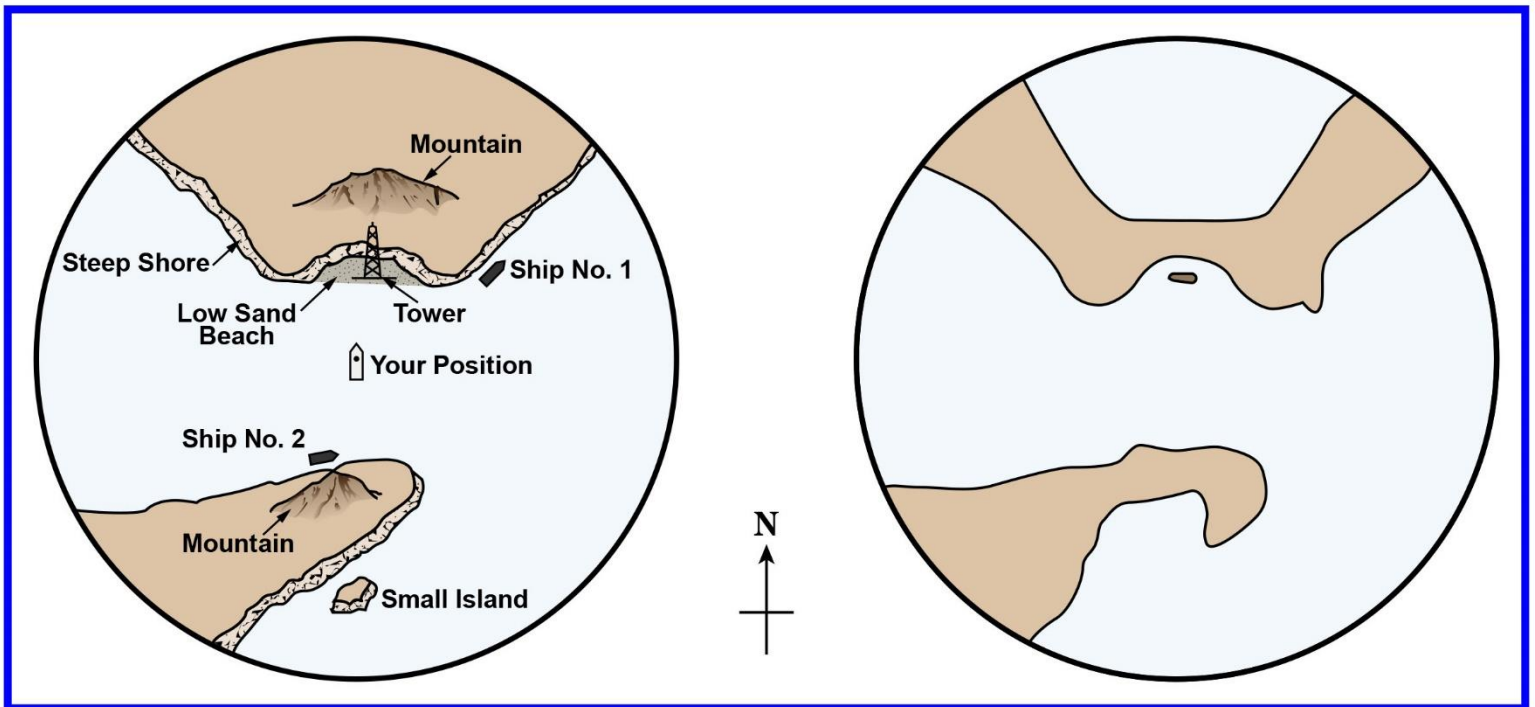
50. What will act to dissipate fog?

- A. Advection of warm air over a colder surface
- B. Downslope motion of an air mass along a coast
- C. Rain that is warmer than air
- D. Upwelling cold water

Correct answer: B



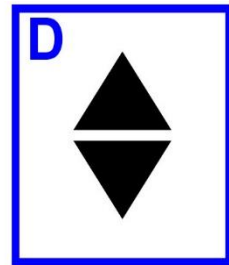
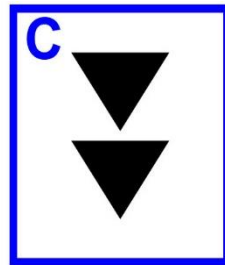
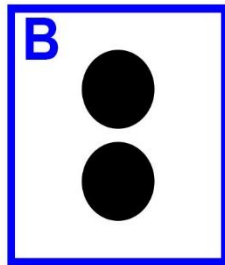
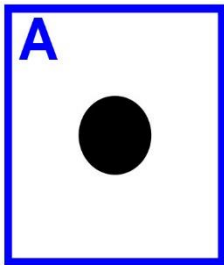
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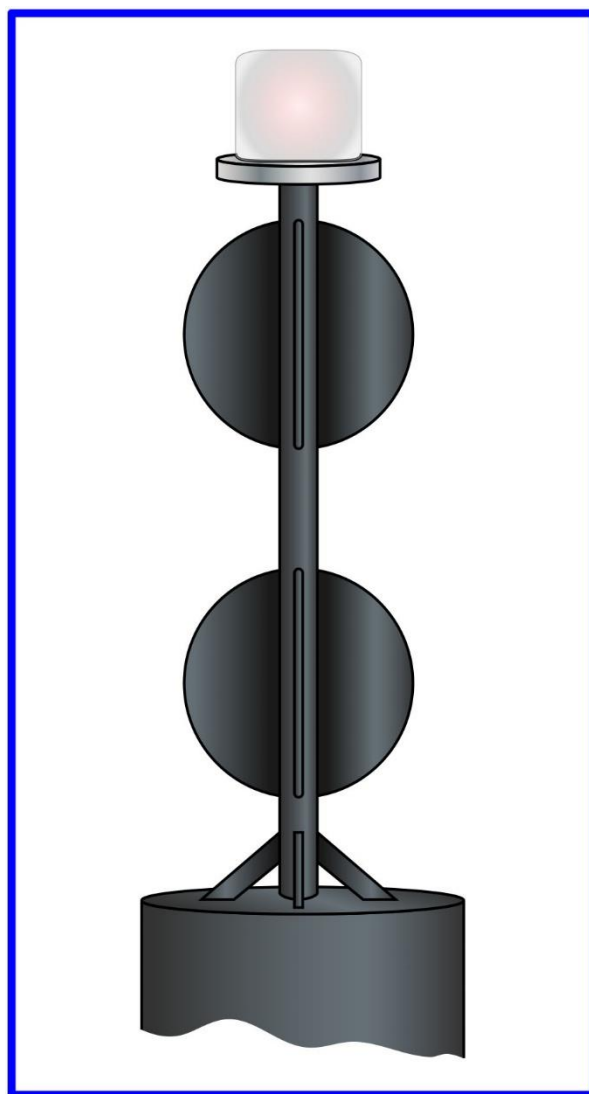
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