

U.S.C.G. Merchant Marine Exam
Master Uninspected Fishing Vessels
Q183 Navigation General – Oceans
(Sample Examination)

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

1. Which meteorological feature controls the climate of the Gulf of America and the coastal area during late spring and summer?
- A. The doldrums
 - B. The Bermuda High
 - C. The horse latitudes
 - D. Tropical cyclones

Correct answer: B

2. A pilot chart does NOT contain information about which item?
- A. Average wind conditions
 - B. Magnetic variation
 - C. Average limits of field ice
 - D. Tidal currents

Correct answer: D

3. Local sidereal time is equal to the _____.
- A. GHA of Aries minus 180°
 - B. LHA of Aries
 - C. SHA of Aries
 - D. right ascension of Aries plus 180°

Correct answer: B

4. Your vessel is making way through the water at a speed of 12 knots. Your vessel traveled 30 nautical miles in 2 hours 20 minutes. What current are you experiencing?
- A. A head current with a drift of 0.4 knots
 - B. A head current with a drift of 0.9 knot
 - C. A following current with a drift of 0.9 knots
 - D. A following current with a drift of 0.4 knot

Correct answer: D

5. Where would you expect to find channels marked with the IALA-A Buoyage System?
- A. Argentina
 - B. Japan
 - C. India
 - D. Canada

Correct answer: C

6. How are buoys which mark isolated dangers painted?
- A. Alternating red and white stripes
 - B. Alternating green and black bands
 - C. Alternating red and black bands
 - D. Alternating green and white bands

Correct answer: C

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

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

Correct answer: B

8. What does a white buoy with an open-faced orange diamond on it indicate?

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

Correct answer: C

9. What do the numbers on isobars indicate?

- A. Wind speed
- B. Rain in inches
- C. Barometric pressure
- D. Temperature

Correct answer: C

10. Which is TRUE concerning the occurrence of Spring tides?

- A. They occur only when the Sun and Moon are on the same side of the Earth and nearly in line
- B. They occur when the Sun and Moon are at approximately 90° to each other as seen from the Earth
- C. They commence at the start of spring, when the Sun is nearly over the equator
- D. They occur when the Sun, Moon, and Earth are nearly in line, in any order

Correct answer: D

11. You are steaming in the open ocean of the North Pacific between the Aleutian Chain and Hawaii. A warning broadcast indicates that an earthquake has occurred in the Aleutians and has generated a tsunami that is predicted to hit Hawaii. What action is necessary for the ship's safety?

- A. No special action as tsunamis are inconspicuous in the open ocean
- B. Prepare for sudden, high-velocity wind gusts from rapidly changing directions.
- C. Calculate the tsunami's ETA at your position and turn to a course that will head into the Tsunami.
- D. Securely stow all loose gear, check deck lashings, and prepare for extreme rolls.

Correct answer: A

12. In the horizon system of coordinates what is equivalent to the poles on the Earth?

- A. Celestial poles
- B. Ecliptic poles
- C. Zenith, nadir
- D. Nodes

Correct answer: C

13. What is published by the U.S. Coast Guard?

- A. Light List
- B. U.S. Coast Pilot
- C. Nautical Charts
- D. Tide Tables

Correct answer: A

14. An ECDIS is required to display which information?

- A. Radar targets
- B. Waypoints
- C. Meteorological data
- D. Soundings

Correct answer: D

15. Which term defines the ocean bottom that extends from the shoreline out to an area where there is a marked change in slope to a greater depth?

- A. Offshore terrace
- B. Continental shelf
- C. Borderland
- D. Abyssal plain

Correct answer: B

16. You are on course 344°T and take a relative bearing of a lighthouse of 090° . What is the true bearing to the lighthouse?

- A. 016°
- B. 074°
- C. 254°
- D. 270°

Correct answer: B

17. When using a mechanical (windup type) marine chronometer, how often should it be reset?

- A. If the chronometer rate changes from gaining to losing or vice versa
- B. At the start of each voyage
- C. Whenever the chronometer error exceeds approximately four minutes
- D. Only when it is overhauled

Correct answer: D

18. Buoys which mark dredging areas are painted which color?

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

Correct answer: D

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

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

Correct answer: B

20. Which is TRUE concerning air masses near the earth's surface?

- A. They are not deflected by the earth's rotation
- B. Air masses are not affected by the earth's gravity
- C. They move from areas of high pressure to areas of low pressure
- D. In North America the air masses move from east to west

Correct answer: C

21. What does the prefix "nimbo" in a cloud's name mean?

- A. It means rainy clouds
- B. It means sheet or layer clouds
- C. It signifies middle or high-altitude clouds
- D. It means great vertical development

Correct answer: A

22. Fog generally clears when the _____.

- A. wind direction changes
- B. wind speed increases
- C. temperature increases
- D. All of the above

Correct answer: D

23. Which statement concerning the chartlet seen in illustration D010NG below is TRUE? (Soundings and heights are in meters)

- A. There is a 12-meter deep hole west of Beito Island and inside the 5-meter line.
- B. The bottom to the south-southeast of the lightship is soft coral.
- C. There is a dangerous eddy southeast of Beito Island.
- D. Maury lightship is visible for 17 miles.

Correct answer: C

24. What is the major problem with taking high altitude sun observations?

- A. Rapidly changing altitudes make it difficult to get an accurate altitude.
- B. Possible errors due to unusual refraction may exist.
- C. It is difficult to establish the point where the sextant is vertical to the horizon.
- D. The tables are not as accurate due to inherent errors in the spherical triangle at high altitudes.

Correct answer: C

25. A latitude line will be obtained by observing a body _____.

- A. on the Greenwich meridian
- B. on the celestial horizon
- C. at lower transit
- D. on the prime vertical

Correct answer: C

26. When the moon is new or full, which type of tides occur?

- A. Diurnal
- B. Apogean
- C. Spring
- D. Neap

Correct answer: C

27. Which is TRUE concerning wind velocity?

- A. It varies inversely with the barometric pressure
- B. It varies directly with the temperature of the air mass
- C. It varies inversely with the absolute humidity
- D. It varies directly with the pressure gradient

Correct answer: D

28. Which is TRUE concerning the points on the earth's surface where the magnetic dip is 90°?

- A. The points are located at the magnetic poles
- B. The points are located at the isopors
- C. The points are connected by the isoclinal line
- D. The points are along the magnetic equator

Correct answer: A

29. Which statement is TRUE for an unlighted, red and green, horizontally-banded buoy with the topmost band red?

- A. They are triangular in shape to indicate that it may not be possible to pass on either side of the buoy
- B. They are conical in shape and called nun buoys
- C. They are cylindrical in shape and called can buoys
- D. They may either be cylindrical or conical since the shape has no significance

Correct answer: B

30. A great circle crosses the equator at 173°E. It will also cross the equator at what other longitude?

- A. 7°W
- B. 173°W
- C. 73°W
- D. 73°E

Correct answer: A

31. What is the approximate geographic range of Fenwick Island Light, Delaware, if your height of eye is 42 feet (12.8 meters)? Refer to "Reprints from the LIGHT LISTS AND COAST PILOTS".

- A. 18.3 nm
- B. 15.4 nm
- C. 10.3 nm
- D. 13.1 nm

Correct answer: A

32. If the gyrocompass error is east, what describes the error and the correction to be made to gyrocompass headings to obtain true headings?

- A. The readings are too low (small numerically) and the amount of the error must be added to the compass to obtain true
- B. The readings are too high (large numerically) and the amount of the error must be added to the compass to obtain true
- C. The readings are too low and the amount of the error must be subtracted from the compass to obtain true
- D. The readings are too high and the amount of the error must be subtracted from the compass to obtain true

Correct answer: A

33. In the Northern Hemisphere, when the center of a high-pressure system is due east of your position, you can expect winds from which direction?

- A. North to west
- B. South to east
- C. North to east
- D. South to west

Correct answer: B

34. Which name is given to the pressure-sensitive element of an aneroid barometer?

- A. Sylphon cell
- B. Column of mercury
- C. Constant pressure capsule
- D. Pressure bellows

Correct answer: A

35. Which term is given to the vertical angle between the horizontal and the magnetic line of force?

- A. Elevation
- B. Magnetic angle
- C. Vertical angle
- D. Magnetic dip

Correct answer: D

36. 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

37. While proceeding along the Mediterranean coast of Spain, you sight the black and yellow buoy shown in illustration D020NG below. Your course is 039°T, and the buoy bears 053°T. What action should you take?

- A. Alter course to 060° and ensure that the bearings decrease
- B. Maintain course and ensure that the bearings increase
- C. Alter course towards the buoy and leave the buoy well clear on either side
- D. Alter course to 053°T and pass the buoy close aboard on either side

Correct answer: B

38. You are running parallel to the coast and take a running fix using bearings of the same object. Which is TRUE if you are making less speed than used for the running fix, in relation to the position indicated by the fix?

- A. Your vessel will be on the track line ahead of the fix
- B. Your vessel will be on the track line behind the fix
- C. Your vessel will be farther from the coast
- D. Your vessel will be closer to the coast

Correct answer: D

39. Your present weather is sunny with a steady barometer. A low swell approaches your vessel from the south with crests passing at relatively long periods of about four per minute. What does this usually indicate?

- A. A tropical cyclone south of your vessel
- B. An extra-tropical cyclone
- C. A warm front from the south
- D. A hurricane about 100 miles south of your vessel and heading in your direction

Correct answer: A

40. Yesterday you took a time tick using the 1200 GMT broadcast, and the chronometer read 11h 59m 59s. Today at the 1200 GMT time tick the chronometer read 00h 00m 01s. What is the chronometer error?

- A. Losing 2 seconds
- B. Fast 2 seconds
- C. Gaining 2 seconds
- D. Fast 1 second

Correct answer: D

41. You are underway on course 050°T and your maximum speed is 13 knots. The eye of a hurricane bears 100°T, 120 miles from your position. The hurricane is moving towards 275°T at 25 knots. What course should you steer at 13 knots to have the maximum CPA?

- A. 339°
- B. 333°
- C. 326°
- D. 320°

Correct answer: B

42. The four standard light colors used for lighted aids to navigation are red, green, white, and _____.

- A. blue
- B. purple
- C. orange
- D. yellow

Correct answer: D

43. Which is TRUE concerning weather information?

- A. Weather information is available through commercial radio broadcasts
- B. Weather information is available on scheduled marine information broadcasts
- C. It is available through VHF-FM continuous marine weather broadcasts provided by the National Weather Service
- D. All of the above

Correct answer: D

44. Which of the following is the reference point to measure an azimuth angle for a body?

- A. zenith distance
- B. observer's meridian
- C. body's meridian
- D. Greenwich meridian

Correct answer: B

45. Where would you expect to find climatological and meteorological tables for the Gulf Coast area?

- A. In any Coast Pilot volume
- B. In the publication entitled Radio Aids to Navigation
- C. In the back of Coast Pilot #5
- D. Only at the National Weather Service office

Correct answer: C

46. Your ARPA has been tracking a target and has generated the targets course and speed. The radar did not receive a target echo on its last two scans due to the weather. What should you expect under these circumstances?

- A. The ARPA has lost all "memory" of the target and must recompute the target data.
- B. The ARPA will give an audible and/or visual lost target alarm.
- C. The ARPA will generate data based on sea return echoes from the vicinity where the target was lost.
- D. The ARPA will generate data as if the target was still being tracked by radar.

Correct answer: D

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

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

Correct answer: A

48. Which is TRUE of echo-sounders?

- A. They measure the average depth from waterline to hard bottom
- B. They measure the average depth of water to soft bottom
- C. They measure the actual depth of water below keel
- D. They measure the actual depth of water

Correct answer: C

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

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

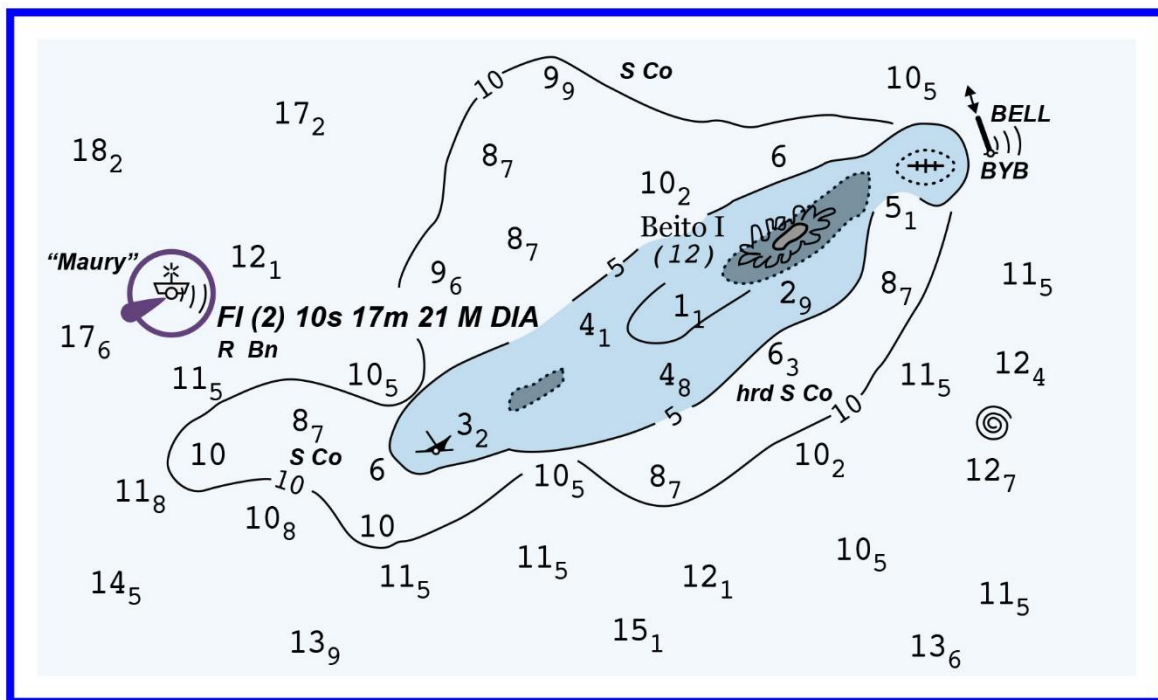
Correct answer: D

50. Which is a feature of a special daymark?

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

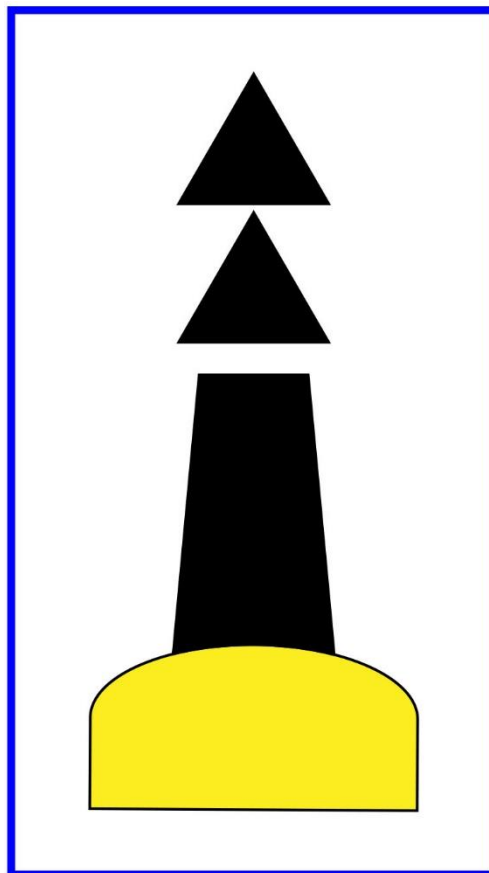
Correct answer: A

D010NG



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