

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.** You take a bearing of  $086^\circ$  of a lighthouse. Which bearing of another object would give the best fix?

- (A)  $261^\circ$
- (B)  $291^\circ$
- (C)  $196^\circ$
- (D)  $242^\circ$

*If choice C is selected set score to 1.*

**2.** Which describes the distance between the surface of the water and the tidal datum?

- (A) The actual water depth
- (B) The range of tide
- (C) The height of tide
- (D) The charted depth

*If choice C is selected set score to 1.*

**3.** In general, on how many radio channels will an automatic identification system (AIS) operate?

- (A) 2
- (B) 4
- (C) 6
- (D) 8

*If choice A is selected set score to 1.*

**4.** What can cause a tsunami?

- (A) A storm surge caused by a hurricane or tropical storm
- (B) A tornado
- (C) A tidal wave
- (D) An earthquake on the ocean's floor

*If choice D is selected set score to 1.*

**5.** You are underway on course  $050^\circ\text{T}$  and your maximum speed is 13 knots. The eye of a hurricane bears  $120^\circ\text{T}$ , 100 miles from your position. The hurricane is moving towards  $265^\circ\text{T}$  at 25 knots. What course should you steer at 13 knots to have the maximum CPA?

- (A)  $324^\circ\text{T}$
- (B)  $299^\circ\text{T}$
- (C)  $306^\circ\text{T}$
- (D)  $276^\circ\text{T}$

*If choice A is selected set score to 1.*

**6.** Which condition would most likely result in fog?

- (A) Warm moist air blowing over cold water
- (B) Airborne dust particles
- (C) Dew point falling below the air temperature
- (D) Warm moist air blowing over warm water

*If choice A is selected set score to 1.*

**7.** You are on course 146°T. To check the speed of your vessel you should observe a celestial body on which bearing?

- (A) 000°
- (B) 056°
- (C) 090°
- (D) 146°

*If choice D is selected set score to 1.*

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

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

*If choice C is selected set score to 1.*

**9.** The ARPA may swap targets when automatically tracking if two targets are in which situation?

- (A) The targets pass close together
- (B) The targets are tracked at the same range
- (C) The targets are tracked on the same bearing
- (D) The targets are tracked on reciprocal bearings

*If choice A is selected set score to 1.*

**10.** The height of a light is measured from which reference plane?

- (A) Mean high water
- (B) Average water level
- (C) Geographical sea level
- (D) Mean low water

*If choice A is selected set score to 1.*

**11.** Which light characteristic may be used on a special purpose mark?

- (A) Quick flashing
- (B) Fixed
- (C) Equal interval
- (D) Occulting

*If choice B is selected set score to 1.*

**12.** 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 barometric pressure
- (B) any time
- (C) a specific temperature
- (D) a specific wing speed

*If choice C is selected set score to 1.*

**13.** 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) Existing visibility conditions, limited only by the curvature of the Earth
- (C) Perfect visibility conditions, limited only by the curvature of the Earth
- (D) Perfect visibility conditions, limited only by interference from background lighting

*If choice C is selected set score to 1.*

**14.** When cold air displaces warm air you have which type of front?

- (A) A warm front
- (B) An occluded front
- (C) A stationary front
- (D) A cold front

*If choice D is selected set score to 1.*

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

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

*If choice B is selected set score to 1.*

**16.** It is unlawful to approach within how many yards of a Northern Right Whale?

- (A) 200
- (B) 300
- (C) 400
- (D) 500

*If choice D is selected set score to 1.*

**17.** What is the light phase characteristic of a lighted isolated-danger mark?

- (A) Interrupted quick flashing
- (B) Very quick flashing
- (C) Long flashing
- (D) Group flashing

*If choice D is selected set score to 1.*

**18.** In the Southern Hemisphere winds in a low pressure system rotate in which direction?

- (A) A clockwise direction
- (B) A counterclockwise direction
- (C) A northerly direction
- (D) A northeasterly direction

*If choice A is selected set score to 1.*

**19.** General information about the location, characteristics, facilities, and services for U.S. and foreign ports may be obtained from which publication?

- (A) World Port Index
- (B) Coast Pilot
- (C) Distances Between Ports
- (D) Sailing Directions

*If choice A is selected set score to 1.*

**20.** What benefit is a weather bulletin to a mariner?

- (A) It provides a legal reason to cancel a projected voyage.
- (B) It allows the mariner to make long term weather forecasts.
- (C) It gives the mariner time to prepare for weather changes.
- (D) It is of little benefit since the weather changes frequently and rapidly.

*If choice C is selected set score to 1.*

**21.** What is used to measure wind velocity?

- (A) Anemometer
- (B) Barometer
- (C) Wind sock
- (D) Psychrometer

*If choice A is selected set score to 1.*

**22.** Under the IALA-A Buoyage System, a buoy indicating the preferred channel is to port would have \_\_\_\_\_.

- (A) an even number
- (B) an odd number
- (C) a pillar shape
- (D) horizontal bands

*If choice D is selected set score to 1.*

**23.** The line of position should be plotted as a circle around the GP of the body when the Ho exceeds what minimum value?

- (A) 80°
- (B) 83°
- (C) 85°
- (D) 87°

*If choice D is selected set score to 1.*

**24.** Which is TRUE for a sextant having an index error that is "on the arc"?

- (A) It has semidiameter error
- (B) It has dip error
- (C) It has a negative correction
- (D) It has a positive correction

*If choice C is selected set score to 1.*

**25.** The Light List indicates that a dayboard is a type KGW. You should take which action?

- (A) Leave it to port when southbound on the Atlantic Coast ICW
- (B) Pass it close aboard on either side
- (C) Look for a green and white diamond
- (D) Look for another daymark to form the range

*If choice D is selected set score to 1.*

**26.** A great circle crosses the equator at 127°W. It will also cross the equator at what other longitude?

- (A) 53°E
- (B) 127°E
- (C) 27°W
- (D) 27°E

*If choice A is selected set score to 1.*

**27.** When drawing a weather map and an isobar crosses a front, the isobar is drawn \_\_\_\_\_.

- (A) kinked and pointing towards the high for a warm front only
- (B) kinked and pointing away from the low
- (C) perpendicular to the front
- (D) kinked and pointing towards the low

*If choice B is selected set score to 1.*

**28.** While steaming north of the Irish coast, you sight a buoy which shows the light rhythm shown in illustration D028NG below. How would you pass this buoy?

- (A) North of the buoy
- (B) West of the buoy
- (C) South of the buoy
- (D) East of the buoy

*If choice D is selected set score to 1.*

**29.** When is an air mass termed "warm"?

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

*If choice B is selected set score to 1.*

**30.** Which are associated with Cumulonimbus clouds?

- (A) A rapid drop in barometric pressure followed by darkness
- (B) Clear skies with the approach of a cold front
- (C) Gusty winds, thunder, rain or hail, and lightning
- (D) Dense fog and high humidity

*If choice C is selected set score to 1.*

**31.** 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) The port side of the channel
- (D) Safe water

*If choice D is selected set score to 1.*

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

- (A) Cumulus
- (B) Stratocumulus
- (C) Cumulonimbus
- (D) Altocumulus

*If choice C is selected set score to 1.*

**33.** Yesterday your chronometer read 11h 59m 58s at the 1200 GMT time tick. Today your chronometer reads 12h 00m 00s at the 1200 time tick. What is the chronometer rate?

- (A) +2s
- (B) 12h
- (C) -2s
- (D) Nil

*If choice A is selected set score to 1.*

**34.** When daylight savings time is kept, the times of tide and current calculations must be adjusted. How can this be accomplished?

- (A) Subtract one hour from the times listed for the subordinate stations
- (B) Add one hour to the times listed for the reference stations
- (C) Apply no correction as the times at the reference stations are adjusted for daylight savings time
- (D) Add 15° to the standard meridian when calculating the time differences

*If choice B is selected set score to 1.*

**35.** You are inbound in a channel marked by a range. The range line is 309°T. You are steering 306°T and have the range in sight as shown in illustration D048NG below. Which action should you take?

- (A) Continue on the present heading until the range is in line then alter course to the right.
- (B) Immediately alter course to the right to bring the range in line.
- (C) Immediately alter course to 309°T if the range is closing.
- (D) Immediately alter course to the left to bring the range in line.

*If choice B is selected set score to 1.*



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

- (A) Small island is not detected due to the multiple echo effect from the mountain.
- (B) Ship No. 1 does not appear as an individual target due to the effect of beam width.
- (C) A tangent bearing of the headland to the south-southeast is corrected by subtracting one-half of the beam width.
- (D) Ship No. 2 is not detected due to the side lobe effect of radar reflecting from the mountain.

*If choice B is selected set score to 1.*

**37.** What information is NOT found in the chart title?

- (A) Date of first edition
- (B) Survey information
- (C) Scale
- (D) Projection

*If choice A is selected set score to 1.*

**38.** What is the distance from the bottom of a wave trough to the top of a wave crest?

- (A) Wave breadth
- (B) Wave length
- (C) Wave height
- (D) Wave depth

*If choice C is selected set score to 1.*

**39.** 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 0.9 knot
- (B) A following current with a drift of 0.9 knots
- (C) A head current with a drift of 0.4 knots
- (D) A following current with a drift of 0.4 knot

*If choice D is selected set score to 1.*

**40.** The equation of time is 12m 00s and the mean Sun is ahead of the apparent Sun. If you are on the central meridian of your time zone, at what zone time will the apparent Sun cross the meridian?

- (A) 1200
- (B) 1212
- (C) 1148
- (D) It cannot be determined from the information given.

*If choice B is selected set score to 1.*

**41.** What is the reaction of a gyrocompass to an applied force known as?

- (A) Precession
- (B) Earth rate
- (C) Gravity effect
- (D) Gyroscopic inertia

*If choice A is selected set score to 1.*

**42.** Which term is given to the mechanical lifting of air by the upslope slant of the terrain?

- (A) Advective lifting
- (B) Topographic lifting
- (C) Convective lifting
- (D) Vertical lifting

*If choice B is selected set score to 1.*

**43.** Which is TRUE if the compass error of a magnetic compass has no deviation?

- (A) The compass error is equal to variation
- (B) The compass error is constant at any geographical location
- (C) The compass error is eliminated by adjusting the compass
- (D) The compass error equals zero

*If choice A is selected set score to 1.*

**44.** Your vessel is leaving New York harbor in dense fog. As the vessel slowly proceeds toward sea, you sight a green can buoy on the starboard bow. Which action should you take?

- (A) Stand on, leaving the buoy to your starboard.
- (B) Stop and fix your position.
- (C) Turn hard right to get back into the channel.
- (D) Pass the buoy close to, leaving it to your port.

*If choice A is selected set score to 1.*

**45.** When is the peak of the hurricane season in the western North Pacific?

- (A) July through October
- (B) November through December
- (C) April through June
- (D) January through March

*If choice A is selected set score to 1.*

**46.** The zenith is the point on the celestial sphere that is \_\_\_\_\_.

- (A) directly over the observer
- (B) over Greenwich
- (C) 90° away from the poles
- (D) on the eastern horizon

*If choice A is selected set score to 1.*

**47.** The difference of latitude (l) between the geographic position (GP) of a celestial body and your position, at the time of upper transit, is represented by \_\_\_\_\_.

- (A) colatitude
- (B) codistance
- (C) altitude
- (D) zenith distance

*If choice D is selected set score to 1.*

**48.** You are steaming eastward in the North Atlantic in an extratropical cyclonic storm and the wind is dead ahead. According to the law of Buys Ballot, where does the center of the low pressure lie?

- (A) Directly ahead of you
- (B) Astern of you
- (C) To the north
- (D) To the south

*If choice D is selected set score to 1.*

**49.** Which level of accuracy can be obtained utilizing the U.S. Coast Guard's Maritime Differential GPS in an established coverage area?

- (A) 10 meters
- (B) 20 meters
- (C) 50 meters
- (D) 92 meters

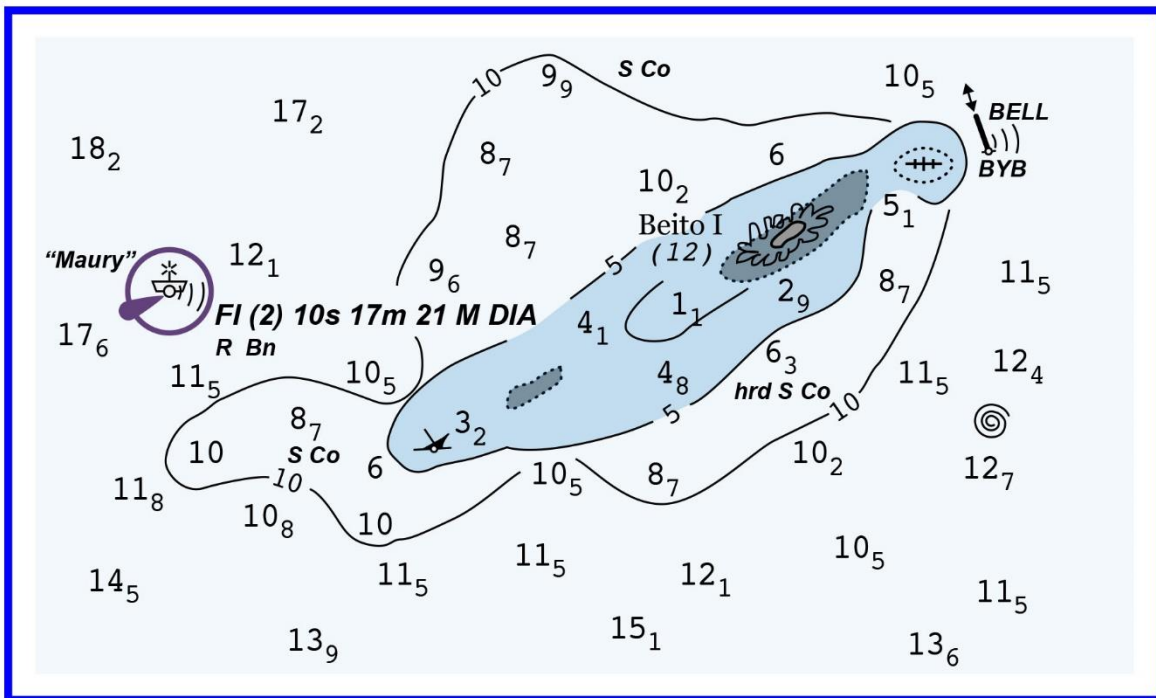
*If choice A is selected set score to 1.*

**50.** At the magnetic equator there is no induced magnetism in the vertical soft iron because \_\_\_\_\_.

- (A) there is no vertical component of the Earth's magnetic field
- (B) the lines of force cross the equator on a 0°-180° alignment
- (C) the intercardinal headings have less than 1° error
- (D) the quadrantal error is 0°

*If choice A is selected set score to 1.*

## D010NG

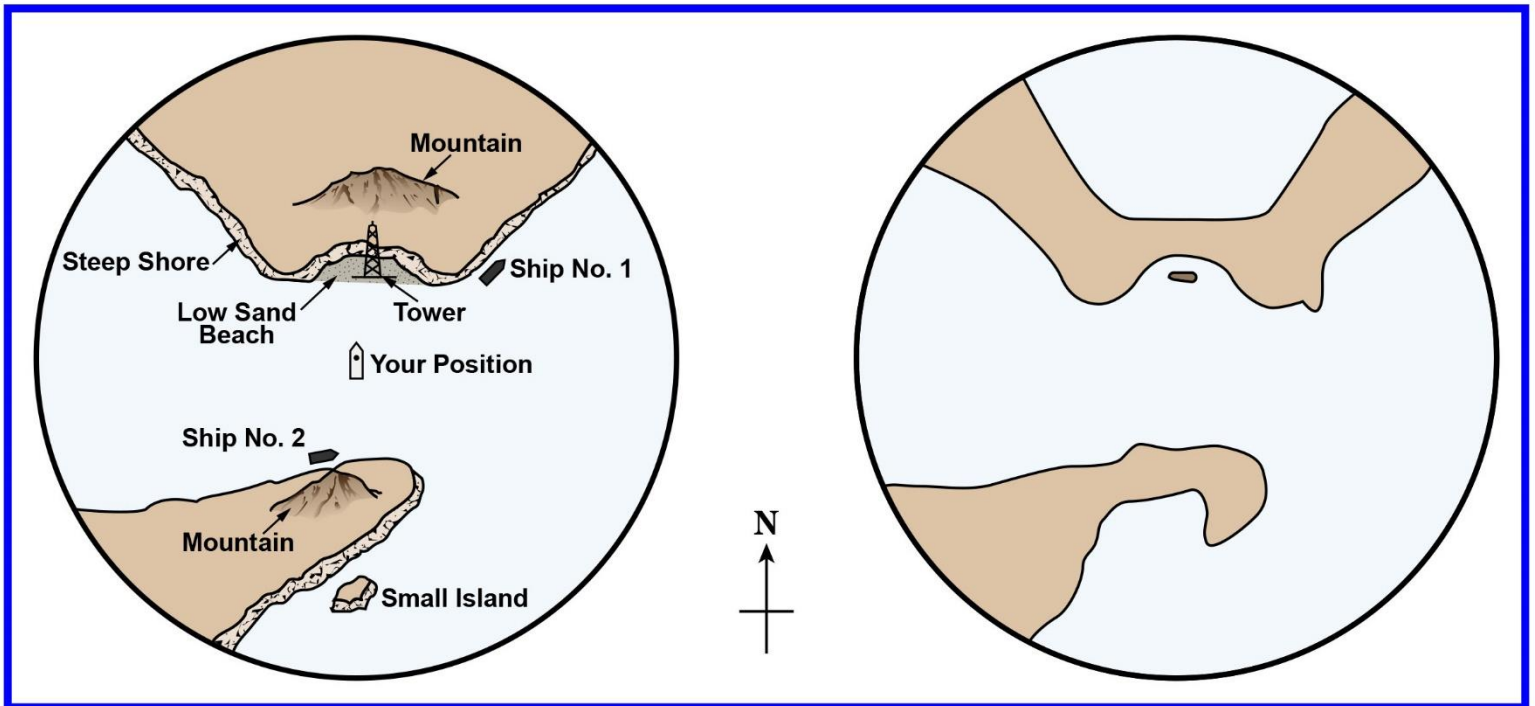


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## D011NG



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## D028NG



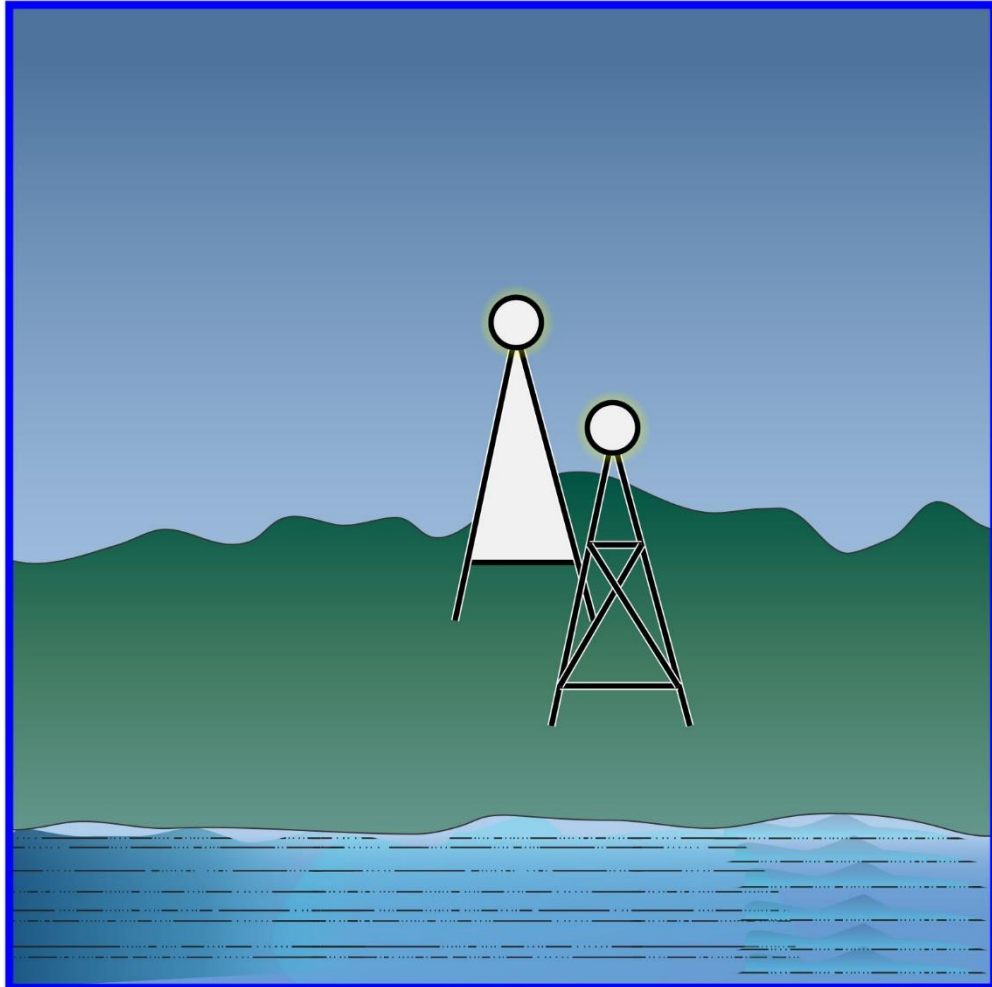
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## D048NG



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