
Q162 - Navigation General: Near Coastal

1. Which would influence a magnetic compass?

- Radio
- Iron pipe
- Electrical wiring
- **All of the above**

Note:
Radio equipment, iron pipes, and electrical wiring all generate or interact with magnetic fields, which can disrupt a magnetic compass; therefore, all listed items influence a compass.

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2. At 0000 you fix your position and plot a new DR track line. At 0200 you again fix your position, and it is 0.5 mile east of your DR. Which statement is TRUE?

- The current is westerly at 0.5 knot.
- The current cannot be determined.
- **The drift is 0.25 knot.**
- You must increase speed to compensate for the current.

Note:
The drift is calculated by dividing the distance between the DR and fix by the elapsed time: 0.5 nautical miles in 2 hours equals 0.25 knots.

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3. At 2221 your course is 222°pgc at a speed of 11.2 knots, when radar detects a buoy bearing 355° relative, at a range of 5.8 miles. The gyro error is 2°E. If you change course at 2226, what course should you steer to leave the buoy 1.0 mile abeam to port?

- 210°pgc
- **228°pgc**
- 231°pgc
- 206°pgc

Note:
Steering 228pgc results in a closest point of approach of 1.0 NM with the buoy exactly abeam to port, requiring true course correction accounting for gyro error and ship movement.

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4. 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?

- **Northeast of the observer**
- Northwest of the observer
- South-southeast of the observer
- West-southwest of the observer

Note:
According to Buys Ballot's law in the Northern Hemisphere, a northwest wind indicates the low-pressure center is located northeast of the observer; this is because facing the wind's direction (southeast) places the low-pressure center to the observer's left.

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5. When adjusting a magnetic compass for error, which is TRUE concerning the deviation table?

- Construct the deviation table before the quadrantal correctors are placed on the compass
- Construct the deviation table after correcting for variation
- **Construct the table after adjusting the fore-and-aft permanent magnets**
- Construct the deviation table before correcting for any deviation

Note:
The deviation table is created after adjusting the fore-and-aft permanent magnets to accurately record the remaining deviation after mechanical adjustments.

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6. What is an advantage of the magnetic compass aboard vessels?

- **It is reliable due to its essential simplicity.**
- All points on the compass rose are readily visible.
- Compass error is negligible at or near the earth's magnetic poles.
- It does not have to be checked as often.

Note:
A magnetic compass's reliability stems from its simple mechanical design, minimizing potential points of failure.

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7. Which agency publishes the Light Lists?

- Oceanographic Office
- National Ocean Service
- Army Corps of Engineers
- **United States Coast Guard**

Note:
The United States Coast Guard publishes the Light Lists as the federal agency responsible for U.S. aids to navigation.

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8. When is an air mass termed "warm"?

- If it originated in a high-pressure area
- **If the ground over which it moves is cooler than the air**
- If it originated in a low-pressure area
- If the mass is above 70°F

Note:
An air mass is classified as warm when its temperature is higher than that of the surface it traverses, a distinction based on relative temperature rather than origin or absolute temperature.

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9. You are at anchor in the anchorage at the entrance to Delaware Bay. You weigh anchor at 1445 DST (ZD +4) on 24 July 1983 and proceed northbound enroute to Philadelphia at a speed of 10 knots. Which of the following should you expect to experience?

- a flood current from Ship John Shoal Lt. to Philadelphia
- an ebb current north of New Castle, DE
- a flood current the entire trip
- **a weak flood between Reedy Island and Edgemoor**

Note:
Based on the 1983 Tidal Current Tables for Delaware Bay, a northbound transit at 1445 DST with a speed of 10 knots will experience a weak flood current between Reedy Island and Edgemoor.

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10. You are anchored in the Aleutian Island chain and receive word that a tsunami is expected to strike the islands in six hours. What is the safest action?

- Plant both anchors with about a 60° angle between them, and let out a long scope to each anchor.
- Increase the scope of the anchor cable and drop the second anchor underfoot at short stay.
- Get underway and be close inshore on the side of the island away from the tsunami.
- **Get underway and be in deep, open-ocean water when the tsunami arrives.**

Note:
The safest action during a tsunami warning is to move the vessel to deep, open-ocean water, as tsunamis are most dangerous in shallow coastal areas where wave height and currents are amplified.
