

Individual wires, used in systems greater than 50 volts, _____.

The details of "Cable and Wiring Requirements" for "Small Passenger Vessels" are cited in Title 46 CFR 183.340.

A. should be supported at 24 inch intervals with plastic tie wraps

Incorrect: Cables and wires are required to be installed with metal supports, spaced not more than 24 inches and using plastic ties only for the purpose of bundling the individual wires.

B. should never be located in a tank

Incorrect: Wires may be located in a tank, but only if they are to provide power to equipment installed in the tank, and provided that their insulation is compatible with the fluid in the tank.

C. must be installed in conduit

Correct Answer: If individual wires, rather than cable, are used in systems greater than 50 volts, the wires must be placed in a conduit.

D. All of the above

Incorrect: As only one of the three answers above is correct, the answer can not be "all."

You are underway on course 050°T and your maximum speed is 12 knots. The eye of a hurricane bears 080°T, 100 miles from your position. The hurricane is moving toward 265°T at 22 knots. What course should you steer, at 12 knots, to have the maximum CPA?

CPA – Closest Point of Approach

Maximum CPA is the greatest possible distance, from the hurricane's center, at the (maximum) ship's speed of 12 knots.

A. 219°

Incorrect: This course will provide a CPA of 59 miles, but not the greatest CPA of the four choices.

B. 208°

Correct Answer: This course will provide a CPA of 62 miles, and the maximum possible distance at 12 knots.

C. 199°

Incorrect: This course will provide a CPA of 60 miles, but not the greatest CPA of the four choices.

D. 190°

Incorrect: This course will provide a CPA of 57 miles, but not the greatest CPA of the four choices.

Radiation spreads a fire by _____.

A. transferring heat across an unobstructed space

Correct Answer: Heat may be transferred through an unobstructed or empty space by radiation.

B. heated gases flowing through ventilation systems

Incorrect: Convection is the natural flow induced by the heating of fluids, such as gases, through ventilation ducts, passageways, etc.

C. burning liquids flowing into another space

Incorrect: The spread of fire through the movement of burning liquids is accomplished by conveyance of the liquid versus natural heat transfer.

D. transmitting the heat of a fire through the ship's metal

Incorrect: Transmission of heat through metal bulkheads and decks is accomplished by conduction.

Which magnetic compass corrector(s) can be set while the vessel is on a heading of magnetic north or magnetic south?

A. Quadrantal spheres

Incorrect: The quadrantal spheres should only be adjusted while the vessel is on the magnetic intercardinal headings of NE, SE, SW and NW.

B. Heeling magnet

Correct Answer: One of the criteria for the vertical height adjustment of a compass' heeling magnet is the vessel's magnetic latitude. It should be lowered – away from the compass card – as the vessel approaches the magnetic equator. Upon crossing the equator, it may be necessary to invert the magnet before raising it.

C. Flinders bar

Incorrect: The Flinders bar is normally adjusted in port, after having acquired deviation data from two widely separated magnetic latitudes. If the length of the Flinders bar has to be changed, the deviation on magnetic headings east and west should be checked and any needed adjustment made by adjusting the position of the fore-and-aft magnets.

D. Fore-and-aft magnets

Incorrect : Fore-and-aft magnets are to be adjusted while the vessel is on the magnetic cardinal headings of east and west, versus the adjustment of the athwart ship magnets while the vessel is on the magnetic headings of north and south.

You must pick up an individual who has fallen overboard from a sailboat. The final approach should be _____.

Note: The recovery of the person is best accomplished if the vessel is positioned such that the person in the water is immediately to leeward (downwind) of the vessel. By so doing, the wind will keep the vessel adjacent to the person being rescued.

Vernacular:

Close-hauled - Pointing as close to the wind as is efficient with the sails hardened right in.

Close Reach - Sailing between close-hauled and a beam reach.

Beam Reach - Running free with the wind on the vessel's beam.

Broad Reach - Sailing between a broad reach and a downwind run.

A. upwind

Incorrect: Although it is easier to reduce speed quickly when close-hauled as the vessel under sail approaches the person in the water, it is more difficult to remain alongside the individual. If the sailing vessel loses headway short of the person, wind and sea will set the vessel to leeward of the person.

B. downwind

Incorrect: This is the worst approach to make because of the inability to reduce speed without considerable maneuvering.

C. on a close reach

Correct Answer: The most effective way to stop a vessel under sail is by "sheeting-out" the sails while on a close reach. This would be done when the vessel is immediately to windward of the person in the water.

D. on a broad reach

Incorrect: It is undesirable to approach with the wind from anywhere abaft the beam. The farther aft the wind, the greater the maneuver to stop the vessel will have to be.