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NAVIGATIONAL RULES OF THE ROAD

Part B – Steering and Sailing Rules Section I



DIGITAL EDITION

Captain Robert L. Figular

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MARINERS
LEARNING SYSTEM™

*NAVIGATIONAL RULES
OF THE ROAD*

Part B – Steering and Sailing Rules

Section I

by Captain Robert L. Figular

Mariners Learning System™
Princeton, New Jersey

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—INTERNATIONAL— Steering and Sailing Rules

SECTION I—Conduct of Vessels in Any Condition of Visibility

RULE 4 – Application

Rules in this Section apply to any condition of visibility.

RULE 5 – Lookout

Every vessel shall at **all** times maintain a proper lookout by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

It is important to remember that the person assigned to maintain a proper lookout must not undertake any duties that would interfere with this responsibility. On some recreational vessels, fishing boats, and towing vessels, where there is nothing that will interfere or obstruct a person from keeping a proper lookout, the boat operator may safely serve as the lookout. However, you must carefully assess the situation and determine without doubt that it is prudent and safe to do so. You must consider all pertinent factors including, but not limited to, the state of the weather, conditions of visibility, traffic density, engine noise, and the vessel's proximity to navigational hazards. The lookout must be able to hear as well as see potential dangers. When navigating in thick fog or restricted visibility, you should station the lookout as low down and far forward as possible.

RULE 6 – Safe Speed

Every vessel shall at all times proceed at a safe speed so she can take proper and effective action to avoid collision and stop within a distance appropriate to the prevailing circumstances and conditions.

In determining a safe speed, the following factors shall be taken into account:

- (a) By all vessels:
 - (i) visibility;
 - (ii) traffic density¹ including concentrations of fishing vessels or any other vessels;
 - (iii) the maneuverability of the vessel with special reference to stopping distance and turning ability in the prevailing conditions;
 - (iv) at night, the presence of background light, such as from shore lights or back scatter² of her own lights;
 - (v) the state of wind, sea, and current, and the proximity of navigational hazards;
 - (vi) the draft in relation to the available depth of water.
- (b) Additionally, by vessels with operational radar:
 - (i) the characteristics, efficiency, and limitations of the radar equipment;
 - (ii) any constraints imposed by the radar range scale in use;
 - (iii) the effect on radar detection of the sea state, weather and other sources of interference;
 - (iv) the possibility that small vessels, ice, and other floating objects may not be detected by radar at an adequate range;
 - (v) the number, location, and movement of vessels detected by radar;
 - (vi) the more exact assessment of the visibility that may be possible when radar is used to determine the range of vessels or other objects in the vicinity.

Rule 6 indicates that every vessel is required to proceed at safe speed in all conditions of visibility. This does not mean the same “safe speed” applies in good as well as in restricted visibility. The Rules state that certain factors are to be taken into account when determining safe speed. Those factors include the state of wind, sea, and current, and the proximity of navigational hazards. This rule contains no requirements to stop a vessel’s engines, reduce speed to bare steerageway, or to go at a “moderate” speed. Safe speed may require these or other actions in good as well as restricted visibility. The navigation rules state that a vessel must be operated at a safe speed at all times so she can be stopped within a distance appropriate to the existing circumstances.

¹ Traffic density indicates how many vessels there are in the area at a given time.

² Back scatter is a reflection caused by the lights on your vessel. If not properly controlled, this reflection can destroy your night vision.

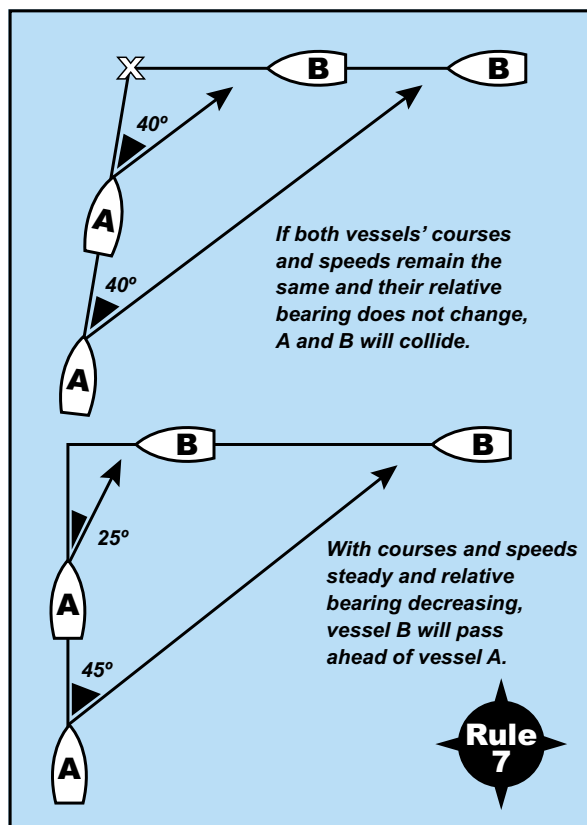
RULE 7 – Risk of Collision

- (a) Every vessel shall use all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists. If there is any doubt, such risk shall be deemed to exist.
- (b) Proper use shall be made of radar equipment if fitted and operational, including long-range scanning to obtain early warning of risk of collision and radar plotting or equivalent systematic observation of detected objects.
- (c) Assumptions shall not be made on the basis of scanty information, especially scanty radar information.
- (d) In determining if risk of collision exists, the following considerations shall be taken into account:
 - (i) such risk shall be deemed to exist if the compass bearing of an approaching vessel does not appreciably change;
 - (ii) such risk may sometimes exist even when an appreciable bearing change is evident, particularly when approaching a very large vessel or a tow or when approaching a vessel at close range.

According to this rule, a risk of collision is considered to exist if you have any doubt as to whether a risk of collision does exist.

Risk of collision may exist even when an appreciable bearing change is evident, particularly when approaching a vessel at close range.

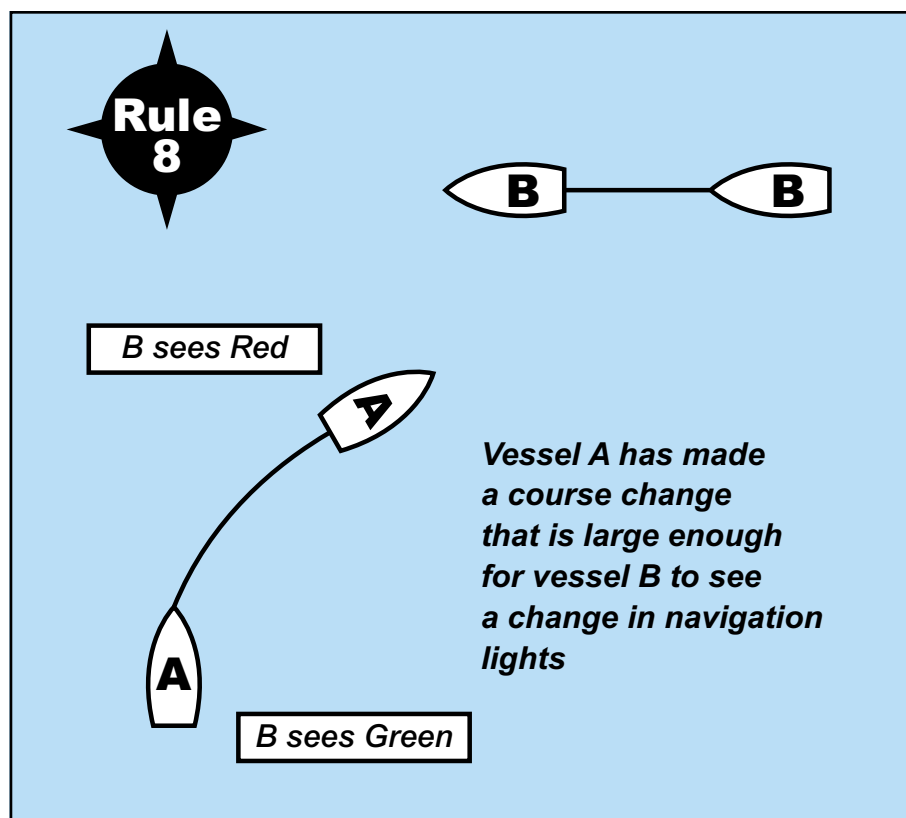
To determine if a risk of collision exists, a vessel fitted with an operational radar must use radar scanning and radar plotting and take frequent compass bearings of an approaching vessel. This equipment must be used to obtain early warning of risk of collision.



Rule 7 acknowledges that radar equipment can provide “scanty” information and recognizes that a person observing the radar can make mistakes interpreting the information. Maintaining a proper lookout, monitoring radio communications, and listening for fog signals may provide better information on the presence, course, and speed of another vessel than your radar.

RULE 8 – Action to Avoid Collision

- (a) Any action taken to avoid collision shall be taken in accordance with the Rules of this Part and shall, if the circumstances of the case admit, be positive, made in ample time, and with due regard to the observance of good seamanship.
- (b) Any alteration of course and/or speed to avoid collision shall, if the circumstances of the case admit, be large enough to be readily apparent to another vessel observing visually or by radar; a succession of small alterations of course and/or speed should be avoided.
- (c) If there is sufficient sea room, alteration of course alone may be the most effective action to avoid a close-quarters situation, provided that it is made in good time, is substantial, and does not result in another close-quarters situation.
- (d) Action taken to avoid collision with another vessel shall be such as to result in passing at a safe distance. The effectiveness of the action shall be carefully checked until the other vessel is finally past and clear.
- (e) If necessary to avoid collision or allow more time to assess the situation, a vessel shall slacken her speed or take all way off by stopping or reversing her means of propulsion.
- (f)
 - (i) A vessel which, by any of these rules, is required not to impede the passage or safe passage of another vessel shall, when required by the circumstances of the case, take early action to allow sufficient sea room for the safe passage of the other vessel.
 - (ii) A vessel required not to impede the passage or safe passage of another vessel is not relieved of this obligation if approaching the other vessel so as to involve risk of collision and shall, when taking action, have full regard to the action that may be required by the rules of this part.
 - (iii) A vessel, the passage of which is not to be impeded, remains fully obliged to comply with the rules of this part when the two vessels are approaching one another so as to avoid risk of collision.

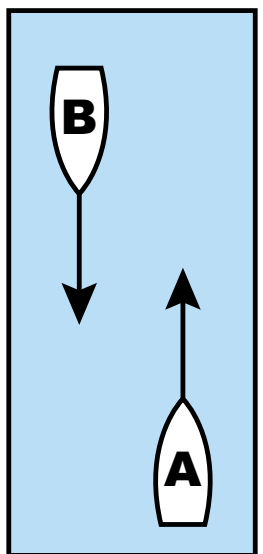


Any action you take to avoid a collision must be taken early enough to be effective and must be large enough to be readily apparent to the other vessel. When action to avoid a close-quarter situation is taken, a course change alone may be the most effective action provided it is a large course change. As a result, Rule 8 advises against making a series of small course or speed changes that may not be detected soon enough by other vessels. Under this rule, any vessel may slacken her speed, stop, or reverse her engines to allow more time to assess the situation.

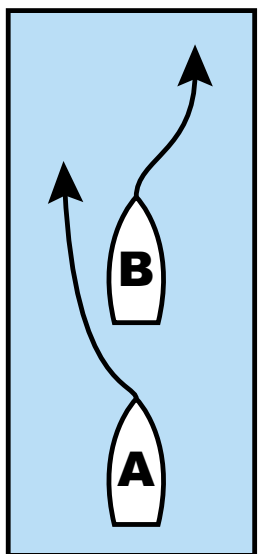
RULE 9 – Narrow Channels

- (a) A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway, which lies on her starboard side, as is safe and practicable.
- (b) A vessel of less than 20 meters in length or a sailing vessel shall not impede the passage of a vessel that can safely navigate only within a narrow channel or fairway.
- (c) A vessel engaged in fishing shall not impede the passage of any other vessel navigating within a narrow channel or fairway.
- (d) A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel that can safely navigate only within such channel or fairway. The latter vessel may use the sound signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.
- (e)
 - (i) In a narrow channel or fairway, when overtaking can take place only if the vessel to be overtaken has to take action to permit safe passing, the vessel intending to overtake shall indicate her intention by sounding the appropriate signal prescribed in Rule 34(c)(i). The vessel to be overtaken shall, if in agreement, sound the appropriate signal prescribed in Rule 34(c)(ii) and take steps to permit safe passing. If in doubt, she may sound the signals prescribed in Rule 34(d).
 - (ii) This Rule does not relieve the overtaking vessel of her obligation under Rule 13.
- (f) A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal prescribed in Rule 34(e).
- (g) Any vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.

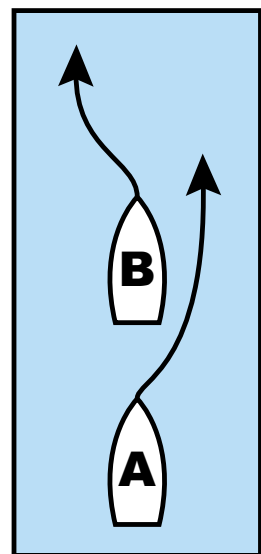
Missing from the Rules of the Road is a definition of what exactly a narrow channel or fairway is. This is because what is narrow for one vessel may not be so for another, making “narrow” a relative term. Consequently, the decision of exactly what constitutes a narrow channel or fairway is left to the judgment of the boaters navigating in that area. In the case of a sailing vessel operating in a narrow channel or fairway that cannot stay close to the starboard edge of the channel, the rules still require that she not impede the passage of a vessel that can only navigate safely within the narrow channel or fairway. Fishing vessels are allowed to fish in narrow channels and fairways but are required to move out of the way of *any* vessel operating within a narrow channel or fairway.



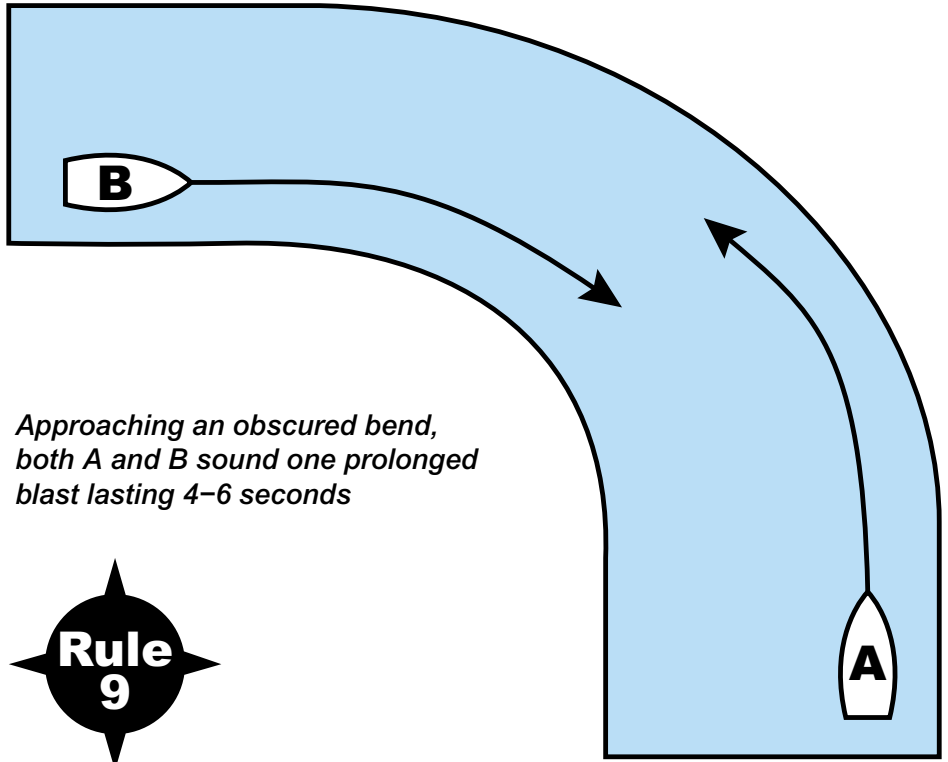
In a narrow channel, both vessels keep to starboard side of channel



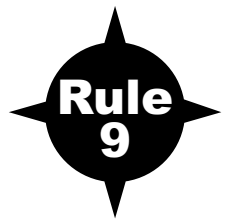
*Vessel A to pass on vessel B's port
A sound -----
B answer -----*



*Vessel A to pass on vessel B's starboard
A sound -----
B answer -----*



Approaching an obscured bend, both A and B sound one prolonged blast lasting 4-6 seconds



RULE 10 – Traffic Separation Schemes

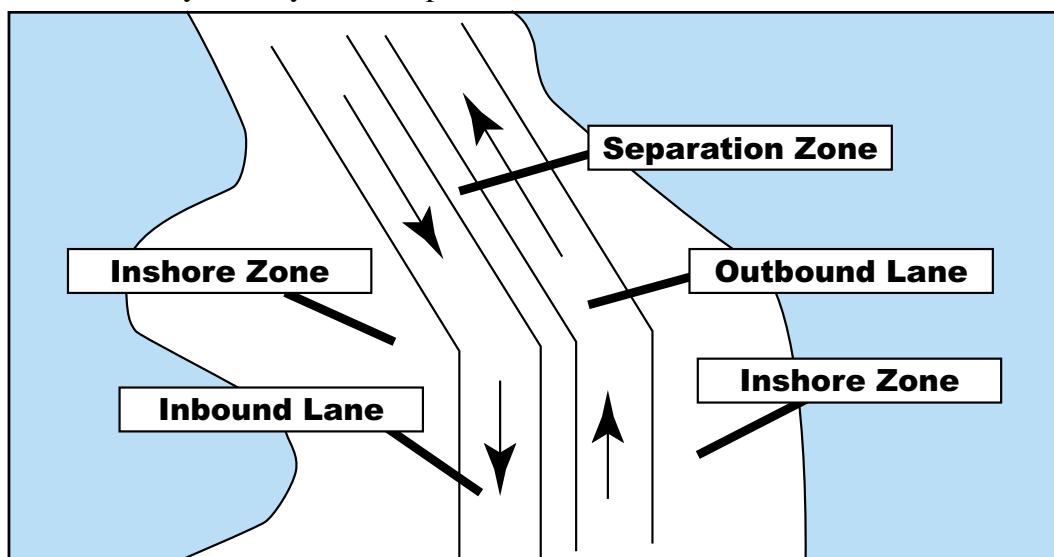
- (a) This Rule applies to traffic separation schemes³ adopted by the Organization and does not relieve any vessel of her obligation under any other rule.
- (b) A vessel using a traffic separation scheme shall:
 - (i) proceed in the appropriate traffic lane in the general direction of traffic flow for that lane;
 - (ii) so far as practicable, keep clear of a traffic separation line or separation zone;
 - (iii) normally join or leave a traffic lane at the termination of the lane, but when joining or leaving from either side, shall do so at as small an angle to the general direction of traffic flow as practicable.
- (c) A vessel shall, so far as practicable, avoid crossing traffic lanes, but if obliged to do so shall cross on a heading as nearly as practicable at right angles to the general direction of traffic flow.
- (d)
 - (i) A vessel shall not use an inshore traffic zone when she can safely use the appropriate traffic lane within the adjacent traffic separation scheme. However, vessels of less than 20 meters in length, sailing vessels, and vessels engaged in fishing may use the inshore traffic zone.
 - (ii) Notwithstanding subparagraph (d)(i), a vessel may use an inshore traffic zone when en route to or from a port, offshore installation or structure, pilot station, or any other place situated within the inshore traffic zone, or to avoid immediate danger.
- (e) A vessel other than a crossing vessel or a vessel joining or leaving a lane shall not normally enter a separation zone or cross a separation line except:
 - (i) in cases of emergency to avoid immediate danger;
 - (ii) to engage in fishing within a separation zone.⁴
- (f) A vessel navigating in areas near the terminations of traffic separation schemes shall do so with particular caution.
- (g) A vessel shall so far as practicable avoid anchoring in a traffic separation scheme or in areas near its termination.⁵
- (h) A vessel not using a traffic separation scheme shall avoid it by as wide a margin as is practicable.
- (i) A vessel engaged in fishing shall not impede the passage of any vessel following a traffic lane.

³ A Traffic Separation Scheme separates traffic proceeding in the opposite or nearly opposite directions by the use of a separation zone or line, traffic lanes, or by other means.

⁴ Separation Zone is an area between two opposing lanes of traffic that is normally kept traffic-free.

⁵ Termination means the end of.

- (j) A vessel less than 20 meters in length or a sailing vessel shall not impede the safe passage of a power-driven vessel following a traffic lane.
- (k) A vessel restricted in her ability to maneuver when engaged in an operation for the maintenance of safety of navigation in a traffic separation scheme is exempted from complying with this Rule to the extent necessary to carry out the operation.
- (l) A vessel restricted in her ability to maneuver when engaged in an operation for the laying, servicing, or picking up of a submarine cable within a traffic separation scheme is exempted from complying with this Rule to the extent necessary to carry out the operation.



Traffic separation schemes provide inbound and outbound lanes to promote the safe flow of traffic and are printed on navigational charts using magenta-colored ink. These zones separate traffic proceeding in one direction from traffic proceeding in the opposite direction. They are usually found in high commercial traffic areas and are used to provide a safe and effective means of controlling the flow of traffic in these areas. They are not the same as narrow channels or fairways, so Rule 9 does not govern them.

Vessels are allowed to fish in traffic separation zones; however, they must proceed in the general direction of the traffic flow and are not permitted to hinder the safe passage of a vessel following a traffic lane.

A vessel using a traffic separation scheme shall avoid anchoring in areas near the termination of the scheme.

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Part B—Steering And Sailing Rules

Knowledge Check

- 1) BOTH INTERNATIONAL AND INLAND. “Safe speed” is defined as that speed where _____.
 - A. you can stop within your visibility range
 - B. you can take proper and effective action to avoid collision
 - C. you are traveling slower than surrounding vessels
 - D. no wake comes from your vessel

- 2) BOTH INTERNATIONAL AND INLAND. The Rules state that certain factors are to be taken into account when determining safe speed. Those factors include _____.
 - A. state of wind, sea, and current, and the proximity of navigational hazards
 - B. maximum attainable speed of your vessel
 - C. temperature
 - D. aids to navigation that are available

- 3) BOTH INTERNATIONAL AND INLAND. You are approaching another vessel and are not sure whether danger of collision exists. You must assume _____.
 - A. there is risk of collision
 - B. you are the give way vessel
 - C. the other vessel is also in doubt
 - D. All of the above are correct.

- 4) BOTH INTERNATIONAL AND INLAND. The Rules state that risk of collision shall be deemed to exist _____.
 - A. whenever two vessels approach from opposite directions
 - B. if the bearing of an approaching vessel does not appreciably change
 - C. whenever a vessel crosses ahead of the intended track of another vessel
 - D. if one vessel approaches another so as to be overtaking

- 5) BOTH INTERNATIONAL AND INLAND. When taking action to avoid collision, you should _____.
 - A. make sure the action is taken in enough time
 - B. not make any large course changes
 - C. not make any large speed changes
 - D. All of the above

- 6) BOTH INTERNATIONAL AND INLAND. When action to avoid a close-quarters situation is taken, a course change alone may be the most effective action provided that _____.
- A. it is done in a succession of small course changes
 - B. it is NOT done too early
 - C. it is a large course change
 - D. the course change is to starboard
- 7) BOTH INTERNATIONAL AND INLAND. Under the Rules, any vessel may slacken her speed, stop, or reverse her engines to _____.
- A. create a crossing situation
 - B. allow more time to assess the situation
 - C. attract the attention of another vessel
 - D. All of the above
- 8) BOTH INTERNATIONAL AND INLAND. A vessel proceeding along a narrow channel shall _____.
- A. avoid crossing the channel at right angles
 - B. not overtake any vessels within the channel
 - C. keep as near as safe and practicable to the limit of the channel on her starboard side
 - D. when nearing a bend in the channel, sound a long blast of the whistle
- 9) BOTH INTERNATIONAL AND INLAND. In narrow channels, vessels of less than what length shall not impede the safe passage of vessels that can navigate only inside that channel?
- A. 20 meters
 - B. 50 meters
 - C. 65 meters
 - D. 100 meters
- 10) BOTH INTERNATIONAL AND INLAND. Which vessel is NOT to impede the passage of a vessel that can only navigate safely within a narrow channel?
- A. Any vessel less than 20 meters in length
 - B. Any sailing vessel
 - C. A vessel engaged in fishing
 - D. All of the above

-
- 11) BOTH INTERNATIONAL AND INLAND. A sailing vessel is proceeding along a narrow channel and can safely navigate ONLY inside the channel. The sailing vessel approaches a vessel engaged in fishing in the narrow channel. Which statement is TRUE?
- A. Each vessel should move to the edge of the channel on her port side.
 - B. The vessels are required to exchange signals.
 - C. The fishing vessel is directed not to impede the passage of the sailing vessel.
 - D. Each vessel should be displaying signals for a vessel constrained by her draft.
- 12) BOTH INTERNATIONAL AND INLAND. A vessel approaching a narrow channel shall _____.
- A. avoid crossing the channel if it impedes another vessel navigating in the channel
 - B. not overtake any vessels within the channel
 - C. keep as close as possible to the edge of the channel on her port side
 - D. anchor only in the middle of the channel
- 13) BOTH INTERNATIONAL AND INLAND. Systems of inbound and outbound lanes to promote the safe flow of vessel traffic in certain areas around the world are known as _____.
- A. merchant vessel reporting systems
 - B. traffic separation schemes
 - C. collision avoidance fairways
 - D. restricted maneuverability channels
- 14) BOTH INTERNATIONAL AND INLAND. A vessel using a traffic separation scheme shall NOT _____.
- A. cross a traffic lane
 - B. engage in fishing the separation zone
 - C. proceed in an inappropriate traffic lane
 - D. enter the separation zone
- 15) BOTH INTERNATIONAL AND INLAND. In a traffic separation scheme, when joining a traffic lane from the side, a vessel shall do so _____.
- A. at as small an angle as possible
 - B. as nearly as practical at right angles to the general direction of traffic flow
 - C. only in case of an emergency or to engage in fishing within the zone
 - D. never

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Answer Key

1. B
2. A
3. A
4. B
5. A
6. C
7. B
8. C
9. A
10. D
11. C
12. A
13. B
14. C
15. A



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