



EXAMINATION IN INSHORE NAVIGATION 22.4.2016

The points given for each correct answer is marked next to the problem. Maximum points are 30. The limit for passing the examination is 15 points. Use the enclosed chart and deviation card.

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Before you start, read this introduction!

The vessel used is a 13 m long power-driven vessel. The draught is 1.0 m and the height is 4.0 m. The vessel is equipped with a standard compass (the deviation card below), a fixed spare compass, log and an echo sounder. Variation= 7° E for the examination chart. The problems are not connected to each other and may be solved in random order.

DEVIATION CARD STANDARD COMPASS

Table with 3 columns: CC, dev, CM. Rows from 0° to 360°.

1. Your position on the chart is two miles (2 M) straight north of the lighthouse Norrudd.

a) What are the coordinates of your position?

1 p

b) What is the true bearing from your position to the lighthouse Norrudd?

1 p

c) From your position, you set the course straight towards the beginning of the 4,5 m fairway (63°57,33'N 025°44,93'E). What compass course do you steer?

1 p

2. You turn to the southwards going 4,5 m fairway and continue along it. In the beginning of the fairway (63°57,33'N 025°44,93'E) you observe another motorboat at the relative bearing 063° to the starboard side of the bow. When the first port-hand lateral mark is abeam on your port side, you observe the same motorboat underway exactly in line with the beacon tower Norrbådan, approximately halfway between your boat and the beacon tower.

a) Is there, according to the International Regulations for Preventing Collisions at Sea, a risk of collision if both boats maintain their course and speed? Explain your answer!

2 p

b) How should you act in the situation according to the International Regulations for Preventing Collisions at Sea?

1 p

3. You continue along the 4,5 m fairway southward and turn at 13.00 - when your position is $63^{\circ}53,6'N$ $025^{\circ}46,7'E$ - to southwest to the 3,0 m fairway. You steer along the fairway at speed of 8 knots.

a) At what time can you see the Skomakaren leading mark at the relative bearing 090° to the port side of the bow?

2 p

b) What is the purpose of the Långö leading marks?

1 p

4. a) You decide to check the deviation of your spare compass and steer along the 3,0 m fairway straight towards the leading marks at Ljusskär-Skogböle. Your compass course according to the spare compass is 053° . What is the deviation of the spare compass at this course?

2 p

b) What is the general direction of buoyage for the 3,0 m fairway? How can you find it out?

1 p

5. a) You are north of Lappören and to determine the position of the vessel you use a hand held bearing compass. The compass bearing to the lighthouse Norrudd is 165° and the compass bearing to the beacon tower Norrbådan is 085° . What is the position of the vessel at the time of observation?

2 p

b) After determining your position you turn to steer compass course 083° . You have adopted the good habit of dead reckoning. Calculate your new true course and draw it on the chart.

1 p

6. From position $63^{\circ}55,68'N$ $025^{\circ}41,30'E$ you steer straight to south (true course 180°) for 10 minutes at speed of 6 knots.

a) What distance did you make?

1 p

b) Are the Inland Waterway Rules valid at this distance? Explain your answer!

1 p

c) You plan to continue southwards trolling for fish. Is this allowed? Explain your answer!

1 p

7. You are planning your route for the next day from Ykskivi lighted icebuoy ($63^{\circ}57,85'N$ $025^{\circ}55,13'E$) to the Vilniemi harbour ($63^{\circ}53,5'N$ $025^{\circ}55,8'E$). You adopt "good seamanship" and make your route plan in advance. **Draw the route plan on the examination chart** by marking **the leading lines, turning points and necessary safety borders** that you will be using for a safe navigation. **Check (x) the hazard objects** you have to take in consideration as you navigate!

3 p

8. a) What is the colouring of the mark indicated by the chart mark aside? On which side do you pass the mark?

1 p



b) What are the colours and order of the reflectors?

1 p

9. Check the right alternative:

Right Wrong

- a) Fishing traps near the surface of the water are marked with two square flags.
- b) A vessel underway can be stopped or making way through the water.
- c) The driver of a registered boat must be over 18 years old.
- d) A boater taking care of the nature uses toxic boat bottom paints as often as possible, preferably every year.

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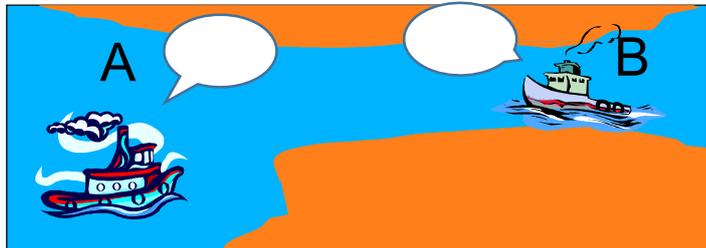
1 p
1 p
1 p
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10. a) What does the waterway sign aside mean?



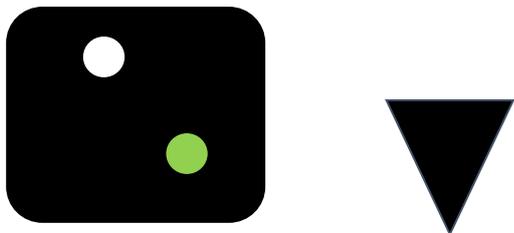
1 p

b) Which sound signal should the power-driven vessel A use when approaching a narrow channel as illustrated in the figure below? What sound signal should the power-driven vessel B, already underway in the narrow channel, use as an answer (according to the Inland Waterway Rules)?



1 p

c) What type of vessel shows lights seen in the figure aside at night and displays the day shape aside (black cone pointing down) during the day?



1 p