



Suomen Navigaatioliitto ry

EXAMINATION IN INSHORE NAVIGATION 20.4.2018

Tot. points

The points given for each correct answer are 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.

Mark your answers also on this examination form.

All calculations should appear on this form or on a separate sheet of paper attached to this form.

Answers without calculations are not accepted.

Name \_\_\_\_\_

Teacher \_\_\_\_\_

Soc. Sign. \_\_\_\_\_

Examin. Site \_\_\_\_\_

Address \_\_\_\_\_

Org. Assoc. \_\_\_\_\_

Post Office \_\_\_\_\_

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Email: \_\_\_\_\_

Before you start, read this introduction!

The vessel used is a 13 m long power-driven vessel, powered by an inboard engine. The draught is 1.2 m and the height is 4 m. The vessel is equipped with a standard compass (the deviation card below), a fixed spare compass and an echo sounder. Variation is 7° E. The problems are not connected to each other and may be solved in random order.

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

a) What are the coordinates of your position?

ANSWER:

b) What is the true bearing from your position to the Skomakaren leading mark?

ANSWER:

c) From your position, you set the course straight towards the beginning of the 3,0 m fairway (63°51,0'N 025°35,3'E). What compass course do you steer?

ANSWER:

2. You decide to check the deviation of your spare compass and steer along the 3,0 m fairway strait towards the leading marks at Stångklubb-Skomakaren. Your compass course according to the spare compass is 079°. What is the deviation of the spare compass at this course?

ANSWER:

DEVIATION CARD  
STANDARD COMPASS

CC	dev	CM
0°	-1°	359°
10°	-1°	9°
20°	0°	20°
30°	+1°	31°
40°	+2°	42°
50°	+4°	54°
60°	+4°	64°
70°	+3°	73°
80°	+2°	82°
90°	0°	90°
100°	-1°	99°
110°	-3°	107°
120°	-4°	116°
130°	-6°	124°
140°	-7°	133°
150°	-8°	142°
160°	-8°	152°
170°	-6°	164°
180°	-4°	176°
190°	-3°	187°
200°	-1°	199°
210°	0°	210°
220°	+1°	221°
230°	+3°	233°
240°	+5°	245°
250°	+6°	256°
260°	+8°	268°
270°	+9°	279°
280°	+8°	288°
290°	+6°	296°
300°	+4°	304°
310°	+3°	313°
320°	+2°	322°
330°	+1°	331°
340°	0°	340°
350°	-1°	349°
360°	-1°	359°

1p

1p

1p

1p

3. You are on the 3.0 m fairway and see the Skomakaren leading mark straight on your right side. You plan to continue along the fairways with a speed of 6 knots until the relative bearing to the Norrbådan is  $045^\circ$  to the port side. What time do you have to start to reach your destination at 12.30?

3p

**ANSWER:**

4. Mention four distress signals, according to the International Regulations for Preventing Collisions at Sea.

1.

2.

3.

4.

2p

5. What factors should be taken into account in determining a safe speed, according to the International Regulations for Preventing Collisions at Sea?

**ANSWER:**

3 p

6. a) At 14:00 your position is  $63^{\circ}54,2'N$   $025^{\circ}36,2'E$ . From this position, you steer CC  $021^{\circ}$  for 4,1 M, after that CC  $127^{\circ}$  for 2,6 M. You arrive at your destination at 14.40. What was your average speed?

3p

**ANSWER:**

b) According to the chart, do you need to take something into account when you continue after altering your course? **Justify your answer!**

1p

**ANSWER:**

7.

a) When does a risk of collision exist, according to the International Regulations for Preventing Collisions at Sea?

1p

**ANSWER:**

b) Two sailing vessels, both having the wind on the same side, are approaching one another so that there is a risk of collision.

Which of the vessels shall keep out of the way of the other, according to the International Regulations for Preventing Collisions at Sea?

1p

**ANSWER:**

c) According to the Finnish Water Traffic Act, how many life jackets or flotation suits or immersion suits are required on the vessel mentioned in the introduction, when it is underway?

1p

**ANSWER:**

8. You have spent the night on the south eastern tip of Yttre Sandö ( $63^{\circ}51,25'N$   $025^{\circ}42,7'E$ ). The car of your guests is at the Vilniemi harbour ( $63^{\circ}53,5'N$   $025^{\circ}55,8'E$ ), and your intention is to take your guests to the harbour.

- Draw your route plan on the examination chart and write the needed calculations and additional information on the examination form
- Mark the leading lines and turning points, bound to the landscape or otherwise accurately determined, which you use to arrive safely at your destination
- If safe navigation requires the use of safety borders, mark them on the chart
- Circle the hazard objects you have to take in consideration as you navigate
- When using compass or echo sounder, calculate the compass courses to be steered, and mark the depths that you use.

4p

**9.**

**a) What are the colors and order of the reflectors of a safe watermark, from top to bottom?**

**ANSWER:**

**1p**

**b) What are the daylight colouring and light characters of a lighted north mark?**

**ANSWER:**

**1p**

**c) What is the visual signal of a cable ferry, at day time?**

**ANSWER:**

**1p**

**10. Check the right alternative:**

Right      Wrong

**a) A power-driven vessel when towing shall exhibit yellow flashing light.**

**1p**

**b) A vessel can exhibit navigation lights only from sunset to sunrise.**

**1p**

**c) Distress rockets belong to obligatory basic equipment of a vessel.**

**1p**

**d) The driver of the vessel mentioned in the introduction must be over 18 years old of age.**

**1p**