



Suomen Navigaatioliitto ry

EXAMINATION IN INSHORE NAVIGATION 12.4.2019

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.**

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Teacher _____

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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.**

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°

1. At 13:06, you decide to determine your position by using a hand held bearing compass. The compass bearing to the lighthouse Norrudd is 188° and the compass bearing to the beacon tower Norrbådan is 113°. What is your position at the time of observation?

3p

ANSWER:

2. a) You are going to boating by using the vessel described in the introduction. What basic equipment there has to be in the vessel, according to the Finnish Water Traffic Act (vesiliikenneasetus)?

ANSWER:

2p

Problem 2 b) on the next page.

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2. b) There is a nautical chart in your boat. In the middle of the compass rose of the chart, there is a text $6^{\circ}15'E$ 2005 (4'E). What is the deviation in the area of the chart in 2019?

1p

ANSWER:

3. a) You have determined your position to be 4 M to 337° away from the Norrudd lighthouse. What are the coordinates of your position?

ANSWER:

1p

b) From this position, you steer CC 078° .
What are the coordinates of your position when the relative bearing to the beacon tower Norrbådan is 90° to the starboard side?

1p

ANSWER:

4. You are at the beginning of the 4,5 m fairway ($63^{\circ}57,35'N$, $025^{\circ}44,90'E$) and decide to check the deviation of your spare compass. From this position, you steer straight towards the leading marks at Svensksund-Skogböle. According to the spare compass, your compass course is 174° . What is the deviation of the spare compass at this course?

2 p

ANSWER:

5. On the northeastern side of the Mervinniemi, you are steering southeast along the 5,2 m fairway. When the Viira lighthouse is abeam on your starboard side, you start your second counter. After driving 12 min 45 s, you observe a red-lighted buoy abeam on your port side. What was your speed?

3 p

ANSWER:

6. a) When is a vessel underway, according to the Regulations for Preventing Collisions at Sea?

ANSWER:

1,5p

b) Can a vessel underway be stopped?

ANSWER:

0,5p

c) How can you determine a risk of collision, according to the International Regulations for Preventing Collisions at Sea?

ANSWER:

1p

d) Two sailing vessels, each having the wind on a different 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?

ANSWER:

1p

7. a) From position $63^{\circ}55,6'N$, $025^{\circ}45,2'E$, you steer CC 287° for 3.5 M. What are the coordinates of your arrival position?

ANSWER:

1p

7. b) When your true course is straight to southwest, what is then your compass course?

ANSWER:

1p

8. You are at anchor on the eastern side of Lappören, at the position $63^{\circ}53,80'N$, $025^{\circ}38,45'E$. You plan to drive to the Vilniemi harbor ($63^{\circ}53,5'N$, $025^{\circ}55,8'E$). Make a route plan on **the examination chart**. Plan your route by using targets visible in the landscape.

Draw your route line on the chart and mark

1. Hazard objects
2. Safety borders (when required)
3. Leading lines
4. Turning points and the leading lines defining them

4p

9.

a) What are the light character and the reflectors of a danger mark, from top to bottom?

ANSWER light character:

0,5p

ANSWER reflectors:

0,5p

b) What does the adjacent pair of water traffic signs mean?

ANSWER:



1p

c) What is the day shape of a fishing vessel?

ANSWER:

1p

10. Check the right alternative:

Right

Wrong

a) A lateral mark has only one reflector.

1p

b) A vessel must always use official fairways.

1p

c) New and working chart plotter is equivalent to an official paper nautical chart.

1p

d) Alteration of direction, in time, is an efficient action to avoid collision.

1p