

NATIONAL BUREAU OF PROFESSIONAL SAILING EXAMS (LEB)

Regeling Bemanning Zeegaande Zeilschepen

(this is an official ruling within the Dutch shipping law and has not been translated yet)

Regulations containing provisions relating to the crew of seagoing sailing vessels in the commercial shipping with the restriction to sailing vessels of less than 500 GT
(regulation crew seagoing sailing ships)

- **Artikel 1**

In deze regeling wordt verstaan onder:

a. *wet:*

Wet zeevarenden;

b. *ervaring:*

de diensttijd uitgedrukt in seizoenen, in een bepaalde functie aan boord van in de vaart zijnde zeilschepen;

c. *binnenwateren:*

de binnenwateren van het communautaire net, behorende tot zone 2, bedoeld in bijlage 1 bij richtlijn nr. 2006/87/EG van het Europees parlement en de Raad van 12 december 2006 tot vaststelling van de technische voorschriften voor binnenschepen en tot intrekking van richtlijn nr. 82/714/EEG van de Raad (PbEU L 389);

d. *seizoen:*

een, al dan niet aaneengesloten, periode van 180 kalenderdagen;

e. *vaargebied I:*

het gebied dat zich uitstrekt van de monding van de Eems over de Duitse Wadden, begrensd door de laagwaterlijn op het Noordzeestrand van de Duitse Waddeneilanden tot de oostpunt van Spiekeroog, en vervolgens van de lijn van de oostpunt van Spiekeroog - Harleboei - vuurschip Weser - vuurschip Elbe I en de Elbemonding tot Brunsbüttel, begrensd door de rode boeienlijn, tevens omvattend het Noord-Oostzeekanaal, het Kielerfjord, de westelijke Oostzee, Belten en Sont, begrensd door de lijn Grenaa - Kullen in het Noorden en in het Oosten door de lijn Falster Bo - Cap Arkona, inclusief het bodden- en haffengebied ten zuiden van Rügen;

f. *vaargebied II:*

een strook kustwater van 25 mijl uit de kust te beginnen dwars van Nieuwpoort tot de monding van de Elbe (Elbe I) en de Eider (Toenning), tevens omvattend het Noord-Oostzeekanaal en de westelijke Oostzee, Belten en Sont en het Kattegat in het Noorden begrensd door de lijn Skagen - Göteborg en in het Oosten door de lijn Simrishamn - oostkust Bornholm -Stettin, met dien verstande dat Bornholm in het Oosten op maximaal 25 mijl gepasseerd mag worden;

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g. vaargebied III:

de gehele Oostzee, de Noordzee, in het Noorden begrensd door de lijn van 63 graden 30 minuten Noorderbreedte (tot maximaal 25 mijl uit de Noorse kust) - 61 graden Noorderbreedte, 1 graad Westerlengte - Strathie Head verbonden met de lijn van Barony Point - Mull - oostkust Colonsay -Islay (Armore Point) - Inishowen Head (Noord-Ierland) en vervolgens in het Zuidwesten van Old Head of Kinsale (Zuid-Ierland nabij Cork Harbour) naar 48 graden Noorderbreedte, 6 graden Westerlengte (ca. 25 mijl west van Pointe du Raz) tot de zuidoever van de Gironde (45 graden Noorderbreedte, 2 graden 35 minuten Westerlengte); tot vaargebied III behoort tevens de gehele Middellandse Zee vanaf de Straat van Gibraltar;

h. vaargebied IIIA:

de zuidelijke Noordzee, in het noorden begrensd door de parallel van 53 graden Noorderbreedte en in het zuiden begrensd door de lijn Calais-Dover, alsmede de wateren tot 30 mijl uit de Europese kusten binnen het vaargebied III;

i. vaargebied IV:

onbeperkt vaargebied.

• **Artikel 2**

1. In plaats van het bepaalde in artikel 8, eerste tot en met vijfde en zevende lid, van het Besluit zeevarenden handelsvaart en zeilvaart, is op de afgifte van een vaarbevoegdheidsbewijs voor het dienstdoen op zeilschepen van minder dan 500 GT het bepaalde in dit artikel van toepassing.

2. Een vaarbevoegdheidsbewijs wordt afgegeven indien de aanvrager aantoont te voldoen aan de bij of krachtens het in het eerste lid bedoelde besluit vereiste kennis en ervaring, mits het bekwaamheidsbewijs voor de zeilvaart ten hoogste 4 jaar voor het indienen van de aanvraag is afgegeven.

3. Een geldig vaarbevoegdheidsbewijs of een aanvulling daarop kan worden vernieuwd indien de houder heeft dienstgedaan in een naar het oordeel van Onze Minister relevante functie waarvoor een vaarbevoegdheid is vereist en die door de houder op grond van de aan hem toegekende vaarbevoegdheden mocht worden vervuld of in een andere, bij regeling van Onze Minister vastgestelde, daarmee vergelijkbare functie, gedurende ten minste:

a. 1 seizoen in de periode van 5 jaar voorafgaand aan de datum van de aanvraag tot vernieuwing; of

b. ½ seizoen in de periode van 6 maanden voorafgaand aan de datum van de aanvraag tot vernieuwing.

4. Een vaarbevoegdheidsbewijs of een aanvulling daarop waarvan de geldigheid niet langer dan 5 jaar is verstreken wordt op verzoek vernieuwd indien de houder voorafgaand aan de aanvraag:

a. een opleiding heeft gevolgd als bedoeld in de artikelen 8.16 of 8.17 van de Regeling zeevarenden en deze met succes heeft afgesloten;

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- b.gedurende ten minste ½ seizoen in de periode van 6 maanden voorafgaand aan de datum van de aanvraag tot vernieuwing in een naar het oordeel van Onze Minister relevante functie boven de sterkte heeft dienstgedaan; of
- c.gedurende ten minste ½ seizoen in de periode van 6 maanden voorafgaand aan de datum van de aanvraag tot vernieuwing in een naar het oordeel van Onze Minister relevante maar lagere functie heeft dienstgedaan dan waarvoor zijn ongeldig geworden vaarbevoegdheidsbewijs gold.

5.Onze Minister geeft op verzoek een vaarbevoegdheidsbewijs af met een geldigheidsduur van ten hoogste 6 maanden voor de vervulling van een functie als bedoeld in het vierde lid, onderdeel c.

6.Een vaarbevoegdheidsbewijs waarvan de geldigheid langer dan 5 jaar is verstreken wordt op verzoek vernieuwd indien de houder voorafgaand aan de aanvraag een opleiding heeft gevolgd als bedoeld in de artikelen 8.16 of 8.17 van de Regeling zeevarenden en deze met succes heeft afgesloten.

7.Indien de aanvrager van een duplicaat vaarbevoegdheidsbewijs aanspraak kan maken op vernieuwing van het vaarbevoegdheidsbewijs, wordt hem desgevraagd met inachtneming van het derde lid een vaarbevoegdheidsbewijs afgegeven.

Hoofdstuk 2. Bekwaamheidsbewijzen en ervaring

• Artikel 3

Voor de afgifte van een vaarbevoegdheidsbewijs voor de functie kapitein zeilvaart met de beperking tot zeilschepen van minder dan 500 GT op reizen in de vaargebieden III en IV is ten minste vereist:

- a.het bekwaamheidsbewijs stuurman grote zeilvaart;
- b.het certificaat basisveiligheid;
- c.het certificaat medische eerste hulp aan boord;
- d.het certificaat medische zorg aan boord;
- e.het algemeen certificaat maritieme radiocommunicatie; en
- f.een diensttijd van 2 seizoenen als wachtstuurman zeilvaart.

• Artikel 4

1.Voor de afgifte van een vaarbevoegdheidsbewijs voor de functie kapitein zeilvaart met de beperking tot zeilschepen van minder dan 500 GT op reizen in de vaargebieden I, II en IIIA, is ten minste vereist:

- a.het bekwaamheidsbewijs stuurman kleine zeilvaart;
- b.het certificaat basisveiligheid;
- c.het certificaat medische eerste hulp aan boord;
- d.het beperkt certificaat maritieme radiocommunicatie; en
- e.een diensttijd van 2 seizoenen als wachtstuurman zeilvaart aan boord van zeilschepen, waarbij ten hoogste 1 seizoen op binnenwateren mag zijn behaald.

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2. Voor de afgifte van een vaarbevoegdheidsbewijs als kapitein zeilvaart met de beperking tot zeilschepen van minder dan 500 GT op reizen in de vaargebieden I en II volstaat, in afwijking van het eerste lid, onderdeel e, een diensttijd van 2 seizoenen als wachtstuurman zeilvaart aan boord van zeilschepen op binnenwateren.

- **Artikel 5**

Voor de afgifte van een vaarbevoegdheidsbewijs als wachtstuurman zeilvaart met de beperking tot zeilschepen van minder dan 500 GT op reizen in de vaargebieden III en IV, is ten minste vereist:

- a. het bekwaamheidsbewijs stuurman kleine zeilvaart;
- b. het certificaat basisveiligheid;
- c. het certificaat medische eerste hulp aan boord;
- d. het algemeen certificaat maritieme radiocommunicatie; en
- e. de leeftijd van 18 jaar.

- **Artikel 6**

Voor de afgifte van een vaarbevoegdheidsbewijs als wachtstuurman zeilvaart met de beperking tot zeilschepen van minder dan 500 GT op reizen in de vaargebieden I, II en IIIA is ten minste vereist:

- a. het bekwaamheidsbewijs stuurman kleine zeilvaart;
- b. het certificaat basisveiligheid;
- c. het certificaat medische eerste hulp aan boord;
- d. het beperkt certificaat maritieme radiocommunicatie; en
- e. de leeftijd van 18 jaar.

- **Artikel 7**

Voor de afgifte van een vaarbevoegdheidsbewijs als gezelschap zeilvaart met de beperking tot zeilschepen van minder dan 500 GT is ten minste vereist:

- a. een schriftelijke verklaring van de kapitein van een Nederlands zeilschip dat de aanvrager heeft aangetoond te voldoen aan de eisen van bekwaamheid, bedoeld in sectie A-II/4 van de STCW-Code;
- b. het certificaat basisveiligheid;
- c. een diensttijd van 1 seizoen als aankomend gezelschap zeilvaart, die op binnenwateren mag zijn behaald; en
- d. de leeftijd van 16 jaar.

Artikel 8 [Vervallen per 03-05-2014]

Artikel 9 [Vervallen per 03-05-2014]

Artikel 10 [Vervallen per 03-05-2014]

Artikel 11 [Vervallen per 03-05-2014]

Hoofdstuk 3. Landelijk Examenbureau voor de Beroepszeilvaart

- **Artikel 12**

1. Een diploma stuurman grote zeilvaart of stuurman kleine zeilvaart, alsmede een certificaat grote zeilvaart of kleine zeilvaart, wordt afgegeven door het Landelijke Examenbureau voor de Beroepszeilvaart.

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2. Het Landelijk Examenbureau, bedoeld in het eerste lid, voldoet aan de volgende eisen:

- a. het heeft rechtspersoonlijkheid;
- b. aan het Landelijk Examenbureau zijn verbonden een Examencommissie, een College van Gecommitteerden en een College van Toezicht;
- c. de Examencommissie bestaat uit deskundigen uit het vakgebied en is belast met het opstellen van examens en de uitvoering daarvan;
- d. het College van Gecommitteerden bestaat tenminste uit een vertegenwoordiger van de bedrijfstak, een vertegenwoordiger van de werknemers in de bedrijfstak, een vertegenwoordiger van de diploma- en certificaathouders en een vertegenwoordiger van het onderwijs voor de beroepszeilvaart.

3. Het College van Gecommitteerden heeft tot taak:

- a. het opzetten en bewaken van beroepsprofielen;
- b. het vaststellen van de eindtermen documenten;
- c. het goedkeuren van het door het bestuur van het Examenbureau opgestelde examenreglement, en
- d. het bewaken van het kwaliteitsniveau van de schriftelijke en mondelinge examens.

4. Het College van Gecommitteerden kan worden aangevuld met deskundigen uit de Handelsvaart of de Koninklijke Marine.

5. Het College van Toezicht is tenminste samengesteld uit een vertegenwoordiger van de bedrijfstak, een vertegenwoordiger van het onderwijs voor de beroepszeilvaart en een onafhankelijke jurist. Het College kiest uit zijn midden een voorzitter.

6. Teneinde het kwaliteitsniveau te garanderen, wordt het Landelijk Examenbureau voor de Beroepszeilvaart jaarlijks onderworpen aan een interne kwaliteitscontrole die wordt uitgevoerd door het Bureau zelf. Eens in de vijf jaar wordt een kwaliteitscontrole uitgevoerd door onafhankelijke externe deskundigen. Alle kwaliteitsrapporten bevatten tenminste de geconstateerde tekortkomingen en de daaruit voortvloeiende acties voor verbetering.

7. De kwaliteitsrapportages, bedoeld in het zesde lid, worden ter beschikking gesteld van de Minister.

8. De bevoegdheid van het Landelijke Examenbureau tot het afgeven van de diploma's, alsmede het certificaat, bedoeld in het eerste lid, kan worden ingetrokken, indien naar de mening van de Minister van Verkeer en Waterstaat uit de jaarlijkse of vijfjaarlijkse kwaliteitscontroles blijkt dat er ernstige tekortkomingen zijn geconstateerd, dan wel dat onvoldoende uitvoering wordt gegeven aan het implementeren van acties ter verbetering, waardoor de kwaliteit van de examinering onvoldoende is gewaarborgd.

Hoofdstuk 4. Slotbepalingen

• Artikel 13

Deze regeling berust op artikel 68 Wet zeevarenden en de artikelen 8, achtste lid(nieuw), en 33 van het Besluit zeevarenden handelsvaart en zeilvaart. \

• Artikel 14

Deze regeling wordt aangehaald als: Regeling bemanning zeegaande zeilschepen.

Deze regeling zal met de toelichting worden geplaatst in de Staatscourant.

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EXAM REGULATIONS FOR SEAGOING SAILING VESSELS

Article 1

a).

These regulations mean by:

Minister:	The minister of infrastructure and Water Management
ILenT:	Inspecting organisation for transport
The Candidate:	The one applying for an exam
LEB:	National bureau of professional sailing exams

b).

PROGRAM OF EXAMINATION FOR THE ACHIEVEMENT OF THE PROOF OF KNOWLEDGE-CERTIFICATE KZV AND GZV AND THE ENDORSEMENT-CERTIFICATE KZV AND GZV

To candidates applying, the opportunity is given to take exams in order to gain the above mentioned certificates according the regulations in this document. The dates the exams are given are arranged at the beginning of the school year by the LEB.

c).

The exam for the **Proof of knowledge certificate officer KZV** contains 13 subjects and the **Proof of knowledge certificate officer GZV** of 11 subjects. The **endorsement certificate** (sail endorsement): only the subjects marked with a *

1. Maritime English (KZV)
2. Maritime law (KZV)
3. General Marine mechanics
4. Maritime Medical (KZV)
5. Science of navigation and practical navigation
6. Astronavigational calculation (GZV)
7. Instruments
8. Meteorology
9. Seamanship (shipbuilding, safety equipment and rig)*
10. Manoeuvring
11. Stability
- 12.1 Collision regulations
- 12.2. Inland collision regulations (KZV) *
13. Theory of sailing and sailing vessels (KZV)* square rig (GZV)*
14. Stability of sailing vessels (GZV)*
15. Cargo Handling Sailing vessels (GZV)

** subjects that are (also) part of the endorsement*

e).

The demands set in order to gain the mentioned certificates are added in the back of this exam program.

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Article 2 Examination board

1.
Associated with the LEB is an Examination board, which is responsible for constructing and auditing the exams of Certificate of knowledge officer KZV, Certificate of knowledge officer GZV, and the certificate for the sail endorsement
2.
The Examination board exists of people with expertise in the field of sailing.
3.
The Examination board constructs the exams and the rating that is applicable, the exams and rating are judged by a member of the committee of commissioners.
4.
The Board of the LEB appoints the members of the Examination board.
5.
The board of the LEB is responsible for the progress of the exams. It will make sure that in every room where exams are being taken, at least two supervisors are present.

Article 3 Committee of commissioners

1.
Associated to the LEB is a **Committee of commissioners**. This committee of commissioners guards the level of quality of written and/or verbal exams.
2.
The Board of the LEB appoints the members of the commissioners committee yearly and names a chairman. The chairman of the commissioners committee cannot be a LEB board member.
3.
When a member is appointed to the committee of commissioners, the subject or subjects for which the commissioner will perform are indicated.

Article 4 Grades

1.
The judgement concerning the knowledge, insight and skills of the candidate are expressed by giving a grade between 1 and 10, calculated on one decimal place.
1 being the worst and 10 being the best grade that can be given.

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2.

The grade mentioned in the first paragraph is determined by the grade given for the subject, rounded off to a whole number where the decimal from 0,5 is rounded up and decimals lower than 0,5 are rounded down.

Article 5 The exam

1.

The examinations are conducted in writing; some subjects have an oral component which is part of the overall exam .

2.

Half of the written examinations are conducted around the end of the calendar year. The written exams for the remaining subjects are taken in the spring.

3.

The **timeframe in which the written exam is conducted** for the KZV and the GZV are the times mentioned below

	KZV	GZV
1. Maritime English	60 min	-----
2. Dutch Maritime law	90 min	-----
2. Marine mechanics I and II	90 min	90 min
4. Maritime Medical	90 min	-----
5. Navigation – Astronomic navigation	120 min	90 min
6. Astronavigational calculation	-----	150 min
7. Instruments/Advanced Bridge Systems	60 min	60 min
8. Meteorology/ Meteorology & Oceanography	60 min	90 min
9. Shipbuilding, safety equipment and rig/ Shipbuilding sailing vessels	90 min	90 min
10. Manoeuvring/Advanced Ship Manoeuvring	90 min	90 min
11. Stability/Advanced ship Stability	120 min	150 min
12.1. Collision regulations	90 min	90 min
12.2. Inland collision regulations (BPR)	60 min	-----
13. Theory of sailing and sailing vessels/Square rigged Sailing and routing	120 min	120 min
14. Stability of sailing vessels	-----	90 min
15. Cargo Handling sailing vessels	-----	60 min

3a.

At the discretion of the LEB, candidates with a medical certificate proving dyslexia or other disabilities that make a written test complicated, can per written exam subject be granted an additional time of up to 20% of the duration of the exam listed.

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4.

The board of the LEB will open at the beginning of each exam, in the presence of the candidates, the sealed package containing the test papers for the subject and is responsible for the presentation of these papers to the candidates. At the moment that all the papers are distributed, the time is noted, and this will mark the official beginning of the test

5.

Candidates may only use the tools that are announced in advance. They may leave the exam room during the exam leave to go to the toilet, but only with the consent of one of the members of the supervisory Examination board.

6.

a. If a candidate has finished the exam, he or she may leave the exam room with the understanding that no noise occurs for other candidates. The examination work made and the assignments are handed in by the candidate to the supervisory members of the Examination board at the exit of the examination room. From the examination room no papers or draft notes can be taken outside.

b. Candidates who arrive late may be admitted to the examination room if no candidate has left before that time.

7.

If the set timeframe for the exam has passed, the members of the supervisory Examination board invite all remaining candidates to finish their work, to leave the examination room and to hand in the exam and any made work and draft notes

Article 6 Correction of exams

1.

The board of the LEB hands over all the exam work to the member of the board of examiners for the specific subject in order to assess this, within an imposed deadline.

2.

The member of the Examination board checks the exam work and assesses this using the assessment criteria set in advance. He expresses his review with a rating of 1 to 10, calculated at one decimal place. Then she/he hands in the checked exam work together with the examination questions and the corresponding assessment standards with his proposed assessment to the appropriate member of the Committee of commissioners.

3.

The committee member reviews the exam work again according the rule outlined in paragraph 2 and sends it back with his proposed mark to the board of the LEB. The relevant committee member may decide to review exams with grades above 6.0 and numbers below 4.0 on a random basis.

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4.

The relevant committee member will establish, in consultation with the examiner, for each candidate a provisional mark, calculated to one decimal place. If they cannot reach agreement, the LEB shall, in consultation with the chairperson of the committee of commissioners, set the provisional mark. If no agreement is reached, the board of the LEB decides.

Article 7 Re-examination

1.

The candidate is given the opportunity to apply for re-examination of a maximum of two subjects per exam round. This is only possible for subjects that have been rewarded a (rounded) 4 or 5.

Exams with a result of less than a rounded 4 are excluded from the re-exams. The candidate shall be given the opportunity in the next school year to join in the exams.

2.

A candidate who **has not** participated in a particular **exam subject** may derive no rights to participate in any **re-examination**. Not taking part in this examination subject is considered to be an achievement mark of less than a (rounded) 4.

3.

The **mark of a re-examination** replaces the figure of the original exam.

4.

The board of the LEB establishes the **re-examination schedule**. The candidates shall be informed as soon as possible.

5.

In exceptional cases the Board of the LEB, in consultation with the chairperson of the Committee of commissioners may decide to give a candidate the opportunity to partake in an **oral re-examination**. This re-examination is conducted by a member of the Examination board in the presence of a member of the committee of commissioners. This member is entitled to ask questions during the exam.

6.

During the conduct of the oral examination the examiner present, together with the committee delegate, makes up a **written report**.

7.

Immediately after each oral exam, the mark is determined by the examiner and the external examiner of the committee of commissioners. The examiner will notify the outcome as soon as possible to the LEB and will also provide the above mentioned official report.

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8.

The final mark for a subject is determined by the mark of the written examination or re-examination, rounded to a whole number as specified in Article 4.

Article 8

1.

A candidate has passed if at least the mark six has been achieved for all subjects of the examination.

2.

The board of the LEB, in consultation with the chairperson of the committee of commissioners, determines which candidates have passed and which are rejected.

Article 9 Results

1.

The results of the exams shall be published anonymously on a predetermined date and time, at the website of the EZS.

2.

To the candidates who have passed all exams, the Certificate of Knowledge or endorsement-certificate KZV or GZV will be awarded. The certificate is signed by or on behalf of the LEB board and the chairperson of the committee of commissioners.

3.

Each candidate will receive a transcript in which the marks obtained in each subject of the examination and the results of the examination are stated after the written exam. The transcript is signed on behalf of the board of the LEB and the chairperson of the committee of commissioners.

Article 10 Dispensation

1.

Exemption for (a) certain subject(s) can be granted if a candidate can show equal qualification. The board of the LEB will decide if exemption applies.

2.

The rejected candidate who will participate in the next examination session will receive exemption for the subjects already covered with a mark 6 or higher. The exemptions are valid for 5 years.

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Article 11 Impediment

If a candidate has a valid reason not to be present during (any part of) the exam, he or she will be offered the opportunity, at no cost, to participate in the next examination session in that exam or to, in exceptional circumstances, participate in the re-examination. The last option is at the discretion of the board of the LEB.

Article 12 Fraud

1.
If an applicant during any part of the exam commits any irregularity, the LEB may deny him or her further participation in the examination.

2.
If the irregularity or fraud is discovered after completion of the examination, the candidate may be refused the certificate and the list of marks can be withheld, or it may be determined that the certificate and transcript may be awarded after a re-examination.

3.
Before a decision according to the first or second paragraph is taken, the board of the LEB will hear the candidate involved.

4.
The board of the LEB will make a decision pursuant to the first or second paragraph, and it shall immediately take a copy of the decision to the **committee of supervision** of the LEB.

5.
The LEB will name an independent **appeal committee** where the candidate involved can make an appeal within 14 days of the decision. The members of the Examination board and of the committee of commissioners must not have a seat on the appeals committee.

6.
The appeals committee shall in its decision on appeal, after consultation with the LEB and where necessary, grant the candidate the possibility to re-make the exam completely or partially.

Article 13 archiving

1.
The board of the LEB shall ensure that the exam, the written work, the associated tasks, assessment criteria and marks, official reports and any other relevant documents are available for inspection to the committee of commissioners during the examination.

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2.

The board of the LEB preserves the written work for **two years** after completion of the exam and will ensure that a complete set of the exam is preserved for **at least five years** in the archives of the LEB.

3.

The marks obtained in the test and the results are preserved in the archives of the LEB.

Article 14

Discussion about the results of the exams will not be allowed.

Article 15

In all cases where this scheme does not provide, and where an immediate decision is necessary, the board of the LEB decides. They will, where possible, have consultation with the chairperson of the committee of commissioners.

Article 16

These regulations may be cited as the Examination Regulations " Zeilvaart", and will be handed to all students.

Article 17

These custom rules shall enter into force on October 1st 2023 and will first apply to the examination session 2023/2024.

Article 18 Complaints

1.

Each candidate has the right to file a written and well-argued complaint concerning the preparations, the completion or the results of the exams. The complaint will be handled by the chairperson of the committee of commissioners.

2.

In case the complaint is not argued enough according to the chairperson, the complaint will not be accepted.

3.

The chairperson will rule the complaint within two weeks after reception.

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4.

A candidate is entitled to file a written and well-argued appeal against the verdict of the chairperson within 1 week after the verdict. This to the **committee of supervision of the LEB**

5.

In case the appeal is not argued enough, to the judgement of the committee of supervision, the committee will not accept the appeal.

6.

The committee of supervision of the LEB will rule within two weeks after reception of the appeal.

Article 19 Extraordinary exam

A candidate may, for personal reasons, submit a request to the board of the LEB to create an extraordinary exam. The board of the LEB may honour a request in exceptional cases and decide within 14 days of the request. An extraordinary examination is held on a date to be determined outside the exam schedule by the board of the LEB and the examiner. The extraordinary exam meets Article 4, 5 and 6 of these regulations. All costs of an extraordinary examination are to be passed on to the candidate concerned. For an extraordinary exam no re-examination can be taken, unless the re-examination can be taken within the school's exam schedule for that particular year and the completed exams satisfies Article 7 of these regulations.

NATIONAL BUREAU OF PROFESSIONAL SAILING EXAMS (LEB)

Examination requirements for exams **Stuurman Kleine Zeilvaart:**

Knowledge in facts means memorize, know and reproduce facts, definitions, formulas, and prescriptions.

Understanding knowledge means understanding of the subject by combining, describing, and determination of essentials.

Examples: what are the similarities between ... ?, What is the importance of?

Perception means applying what has been learned in examples and sample situations.

Practical skills means actually applying the learned knowledge in practice.

Main Subject 1: English Language KZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Enough to be able to read and understand nautical almanacs.		X			40
Knowledge of Standard marine Communication phrases	X				40
Oral: English speaking skills on a Nautical subject (practical examination)				X	20

Main Subject 2: Law of the Sea KZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Purpose of maritime law and ministerial orders	X				10
Main elements of „ „ and „ „	X				
Legal Stipulations concerning safety	X				5
Tasks of the Shipping Inspection	X				10
Tasks for the Board of Shipping supervision	X				
The Captain His position His relation to the shipping company and the crew Acting upon special circumstances on board.	X				20
Employment contract: General	X				10
Maritime related	X				
Signing on	X				5
Realisation of the law on working times and resting times in shipping			X		5

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Logbook			X		10
Ship's / Captain's protest			X		
Main elements					
Customs declaration			X		25
Assistance and salvage			X		
Assistance	X				
Damage and insurance	X				
Legislation to prevent maritime pollution	X				

Main Subject 3: Marine Engineering KZV	Knowledge in facts	Understan- ding knowledge	Percep- tion	Practical skills	%
Engines					
Two- and four stroke engines		X			60
Parts and how they are connected	X	X			
Cooling and lubrication	X		X		
Propulsion					
Thrust-block	X				20
Stern tube with -bush and -gland	X				
Stern tube bearings		X			
Gearbox		X			
Auxiliary systems:					
Rudder	X				10
Pumps	X				
Bilge pumping system	X				
Fuels system	X				
Electrics					
Power and capacity				X	5
Safety				X	
Technical drawings	X				5

Main Subject 4: Maritime Medical (and MFA/MC STCW) KZV	Knowledge in facts	Understan- ding knowledge	Percep- tion	Practical skills	%
General:					
Assist patient during consult	X				5
Medical guide for shipping	X				
Medical equipment on board	X				
Common pain control	X				
Evaluation:	X				
Gather info With form for RMA	X				5
Apply for RMA correctly					
Medical administration					
-For patients		X			4
- For medicines		X			

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Medical rules conditions and consequences of medical acting	X				3
Basic Life support Determine ABC CPR alone and with help Stable side position Heimlich manoeuvre				X X X X	7
General care for injuries.				X	5
Infections recognition and treatment	X				5
Care for bleedings Manually stop. Stop and cover with first aid kit	X			X	4
Burn- and freeze wounds Estimate degree of wound. Treatment of wounds.	X		X	X	4
Damage to bodyframe Symptoms of fractures, sprain or contusion. Immobilise fracture. Donning Supporting bandage. Cause and symptoms shoulderluxation Actions to reposition shoulder luxation.	X X			X X X	4
Head, ear, eye, nose and throat injuries Treatment on board.	X				3
Dirt or liquid in the eye Eye examination. Remove dirt correctly. Protection after cleaning	X		X X		3
Dental care Treatment on board	X				2
Infectious diseases Prevention. Start treatment in consult with doctor. Knowledge SOA. prevention SOA.	X X X	X			4

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Tropical diseases Gather information about the expected tropical diseases. Start treatment in consult with doctor. Risk areas malaria. Way of contamination, symptoms and complications malaria. Prevention of malaria.	X		X		4
Cardiovascular diseases cause, symptoms, distinguish and treatment of angina pectoris and infarct.	X				3
Recognizing medical problems because of alcohol and drug use	X		X		3
Acute abdominal pain Most relevant causes, symptoms and complications. Colics. Abdominal research.	X	X		X	4
Gynaecologie Problems during pregnancy.	X				2
Psychiatry Most important indications psychosis	X				2
Death on board Prepare and preserve is described in medical guide.	X				3
Nursing and care Possibilities on board. Dangers related to bednursing.	X	X			5
Transport of injured Materials for evacuation with stretcher. Lifting on stretcher. Dangers of transport on board Prepare stretcher for lifting	X X	X		X X	4
Evacuation by helicopter Guiding in rescue/doctor. Handling guideline. Directions that might be given during evacuation.	X X X X	X			4
Drowning and under-cooling Best treatment drowning. Best treatment hypothermia	X X				4

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Advice request RMA					
Finger and hand injuries	X				4
Urine way infections.	X				
Pieterman sting.	X				
Throat infection.	X				
Itching rash/ allergy	X				
Diabetes.	X				
Epilepsy.	X				

Main Subject :5.1 Navigation KZV	Knowledge in facts	Understan- ding knowledge	Percep- tion	Practical skills	%
Directions, distances and coordinates on the earth; Knowledge and use of nautical charts; Knowledge of methods of projection	X X		X		10
Coursework and conversion of courses Conversion of bearings at compass work; Influence of leeway and current; Dead Reckoning; Compass error by lights in line and Snellius (Three-point problem) Voyage preparation Restricted waters Ice Restricted visibility VSS and VTS	X X X X X		X	X X X X X	25
Knowledge of the compass error Error analysis		X	X		10
Position fixing : By way of bearings, running fix Dead Reckoning (leeway, current) Radar GPS	X X			X X X X	10
Horizontal and vertical tidal movements.		X			10
Course to steer (for current and emergency)	X			X	10

Main Subject : 5.2 Practical Navigation KZV	Knowledge in facts	Understan- ding knowledge	Percep- tion	Practical skills	%
Practical assignment: Chart reading and use of charts, nautical lists and pilots Piloting and position fixing in the chart.	X		X	X	10

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Light Characteristics and Nominal, Geographical and Luminous range. The use of: Pilots List of Lights. Luminous, Nominal and Geographical ranges. Admiralty Tide Tables Tidal Current Tables and Tidal Current Charts	X			X X X X X	X X X X	10
The IALA Buoyage System	X					5

Main Subject : 6 Nautical Instruments KZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
1. Magnetic compasses: Construction magnetism Desirable Characteristics Verticity Compensation	X X	X	X X		10
2. Instruments for obtaining Bearings: Principle Bearing Bar Pelorus Thomson bearing Instrument	X X X	X			5
3. Logs: towing log Pressure log Electro-magnetic log Doppler sonar speed log Other devices.	X X X	X X		X	10
4. Instruments for depth measurement: The Lead Echo sounder Ultrasonic sound Sound propagation characteristics Principle Impulse length	X X	X	X X	X	15
5. Radar: Presentation Wave- and Pulse length Resolution in bearing Resolution in Range Sea and Rain Clutter Adjusting Bearings Racon Sart	X X X X	X X	X X	X	25

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6. radar plotting, essay	Assessment				
7. GPS					
System	X				
Principle	X				
Accuracy		X			
Datum transformations					
DGPS and other accuracy improvements	X		X		15
7. Barometers					
Aneroid barometers	X				
Barometer corrections					
barograph	X		X		5
8. AIS (Automatic Identification System) and (S)VDR: (simplified) Voyage Data Recorder	X				10
	X				

Main Subject 7: Meteorology KZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Interpreting and understanding synoptic charts		X		X	45
Gale warnings		X			5
Lifecycle of lows (N-hemisphere)		X			20
Interpreting meteorological instruments o/b		X			10
Knowledge of weather reports and weather symbols		X			
Local winds and weather phenomena		X			10
Clouds		X			
Wind and wind force		X			10
Buys Ballots Law	X				

Main Subject 8: Ship construction, rigging and equipment KZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Principles of ship construction	X				
Purpose and names from main construction parts of ships.	X				30
Understanding of ship drawings			X		5
Methods of approved Shipping bureaus	X				10
Watertight construction and freeboard			X		10
First actions to be undertaken upon (partly) loss of watertight compartments	X				5
Maintenance					
ship	X				
equipment	X				5

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Dry docking and docking works	X			5
Actions for preventing environmental pollution			X	5
Safety while working on board	X		X	5
Equipment according to shipping law and the use of it.	X			5
Fire and smoke detection, alarm installation		X		5
Main fire extinguish installation				
Purpose	X			5
Lay-out	X			
Operation	X			
Rope and wire	X			5

Main Subject 9: Manoeuvring/ Seamanship KZV	Knowledge in facts	Understan- ding knowledge	Percep- tion	Practical skills	%
Propulsion:					
Functioning	X				5
Propeller types	X				
Rudder:					
Functioning	X				5
Types	X				
Forces			X		
Wheel house poster		X			5
Standing watch and hand over. Bridge watchkeeping directions	X		X		15
Manoeuvring					
Preparation	X				
Rope handling	X				
No wind, no current	X	X	X		15
With wind / current	X		X		
Arrival at/ departure from a berth.	X		X		
Arrival / departure mooring buoy.	X		X		
Anchoring					
Preparation	X				
Dropping anchor			X		
Heaving anchor			X		
Mooring and span mooring			X		10
Heavy weather manoeuvring					
Heaving to/ scudding/ laying a hull	X	X	X		5
Grounding			X		
Entering a port with a cross current			X		5
MOB manoeuvres		X			5

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Manoeuvring constricted waters Sailing passing a vessel on opposite course Overtaking a vessel Passing through a lock	X X X X		X X X X		5
Pilot boarding	X				5
Damage control	X				5
Taking steps after grounding	X				5
IAMSAR procedures	X	X			10

Main Subject 10: Stability KZV	Knowledge in facts	Understan- ding knowledge	Percep- tion	Practical skills	%
Static stability with an angle for use of stability information o/b	X			X	10
Influence on stability of Freeboard Ship's breadth Displacement	X X X				7,5
Definitions and correlation of Volume and displacement Centre of buoyancy Centre of gravity Height of metacentre Initial metacentric height Righting arm Base point Torque Moment	X X X X X X X X X				10
Law of the moving base point	X				10
Calculation of VCG Using moments Using GG' (shift of G) Using inclining test	X X X				10
Importance of GM for stability	X				5
Correlation between GM and roll period	X				5
Characteristics of tender and stiff ship	X				7,5
Causes of heel Means to neutralize heel Heeling moment due to giving helm		X	X X		5
Influence of free surface moment	X				7,5
Course of centre of buoyancy and height of metacentre with increasing heeling angle	X X				5

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Static stability curve Meaning of maximum righting arm and stability range Influence of ship's dimensions	X	X			7,5
Calculation of stability- and heeling moment at small heeling angles	X				5
Knowledge and practical use of statutory static stability criteria for sailing passenger vessels Understanding of static stability particulars on board	X			X	5

Main Subject 11.1: Rules of the road KZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Rules Thorough knowledge Practical application	X		X		100

Main Subject 11.2: Rules of the road for Inland waters KZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Rules Thorough knowledge Practical application	X		X		100

Main Subject 12: Sailing KZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Fore- and aft rigged sailing ships: Names & descriptions Knowledge of materials Constructions and shapes Sail fixing methods Standing rigging Reef methods Running rigging Ropes and materials	X X X X X X X X	X	X		20
Blocks Tackles Winches			X X X		10

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Wind:					
Effect on sails and rudder	X		X		
Driving effect	X				20
Disturbance	X				
Wind wash effects	X				
To trim sails	X				
Various sail forms	X				
Various rigging forms	X				
Sail plan	X				25
Lateral centre	X				
Centre of effort of sails	X				
Sheet: trimming & determine attachments	X				
Sail: handling and manoeuvring	X		X		
Organisation on board			X		25

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Examination requirements for the exam **Stuurman Grote Zeilvaart:**

Main Subject 1.1: Marine-engineering GZV	Knowledge in facts	Understand- ing knowledge	Percep- tion	Practical skills	%
Diesel engines Fuel use	X	X			10
Electrics Alternating current Direct current Electricity on board Check on ground fault Safety	X X X	X X X X X	X X X	X X	20
Main Subject 1.2: Auxiliaries GZV	Knowledge in facts	Understand- ing knowledge	Percep- tion	Practical skills	%
Pumps: Positive displacement pumps Operation & differences Impuls pumps Operation & differences Other pump types Valves Pump seals	X X X X X	X X X			20
Steering-engines and emergency steering equipment		X			10
Systems Potable water (cold/warm) Hydraulics Fuel Air Technical drawings	X X X X X	X X X		X	30
Oil record book		X			10

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Main subject: 2.2 Astronomical Navigation GZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Use of the Nautical Almanac: Sun, Moon, Planets and Stars. Lines of position and the altitude intercept Method. Error theory and bisecting lines Use of Calculators and navigational programs.	X X X		X	X	25
Rhumb line, Course and Distance Midlatitude and Mercator Sailing. Great circle, Course and Distance, Vertex Composite Track Calculations		X X X X			20
Altitude Corrections for all Celestial bodies Time and Time calculations. Equation of Time and Arc to Time. Sunrise, Meridian-Passage and Sunset. Nautical and Civil Twilight. Azimuth calculations Sun- and star fix. Latitude by Meridian Passage. Zenith Distance. Latitude by Polaris Moon and Planets Tropical sun sight	X X X X X X X X X X	X X			25
Sun-Moon Fix, Running Fix Sun-Fix by Zenith Distance Calculations	X X				10
Horizontal and vertical Tidal movements Admiralty tide tables worldwide Standard and secondary ports	X			X	10
Sight Reduction HO 249		X		X	10

Main subject : 2.3 Practical Navigation GZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Nautical Charts; Use of Nautical Charts Critical Interpretation Entering Courses and bearings.	X	X		X	KZV
Knowledge about characters and ranges of lights	X				KZV
Pilots, Lists of Lights, Tide tables, Current Atlases and Tidal stream diagrams for entering harbours and landfall.			X	X	KZV
Use of Current Atlases and Tidal stream diagrams				X	KZV
IALA buoyage system	X				KZV

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Main subject 3: Celestial Navigation Calculations. GZV	Knowledge in facts	Understan- ding knowledge	Percep- tion	Practical skills	%
The Sailings Rhumb line course and distance Great circle course and distance Difference between GC and RL		X X X		X X X	10
Altitude Corrections Latitude at Apparent Noon Time; Eqn. of Time, Time and Longitude Standard- and zonetime. Date line.	X X X			X X X	10
Azimuth Calculations	X			X	10
Latitude by Polaris	X			X	10
Sight Reduction. Sun and Stars	X			X	25
Sun-Moon fix, Starfix. Sun-Fix by Zenith Distance Calculations		X X		X X	10
Horizontal and vertical tidal movements Admiralty tide tables worldwide. Standard and secondary ports"	X			X	15
Practical assignment: Astronomical calculation	X			X	10

Main subject : 4 Advanced Bridge Systems (instruments) GZV	Knowledge in facts	Understan- ding knowledge	Percep- tion	Practical skills	%
Magnetic compasses: Construction magnetism Desirable Characteristics Verticity Compensation	X X	X	X X X		5
Sat Compass	X		X		5
Instruments for obtaining Bearings: Principle Bearing Bar Pelorus Thomson bearing Instrument	 X X X	X			5
Sextant Construction Usage corrections	X	X	X		10
Time unit			X		5
Gyrocompass Principle Couse and speed corrections	X X				10

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Logging: towing log Pressure log Electro magnetic log Doppler sonar speed log Other devices.	X X X X	 X X	 	X 	5
Instruments for depth measurement: The Lead Echo sounder Ultrasonic sound Sound propagation characteristics Principle Impulse length	 X X 	 X 	 X X	X 	5
Radar: Presentation Wave- and Pulselength Resolution in bearing Resolution in Range Sea and Rain Clutter Adjusting Bearings Racon + Sart	X X	 X X X	 X X 	 X	18
GPS System Principle Accuracy Datum transformations DGPS and other accuracy improvements	X X X	 X 	 X	 	10
ECDIS Charts and system Licences and updates System configurations and updates Log and route files ECDIS logbook for system check	X X X X	 	 X X X	X 	17
AIS (Automatic Identification System) and (S)VDR (Voyage Data Recorder)	X X	 	 	 	5

Main subject 5: Meteorology, oceanography and hurricane navigation GZV	Knowledge in facts	Understand- ing knowledge	Percep- tion	Practical skills	%
Knowledge of meteorology and oceanography for Keeping ships meteo log Keeping ships current log Writing a ships weather report Interpreting ships weather reports		X X X X			10
Interpreting and understanding weather maps (N- and S- hemisphere)		X		X	KZV
Gale warnings		X			KZV
Lifecycle of Lows and Anticyclones (S-Hemisphere)		X			10

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General pattern of barometric pressure on Earth (acc. to Ferrell and Hadley) Causes and effects General circulation of the atmosphere Daily movement of Barometric pressure Winds: Constant Periodical Variable Intertropical convergence zone and its pos. due to suns-declination	X X X X X X X X X	X X X X X			10
Air Masses and source regions Lapse rate and stability conditions Fog: Types of fog. Disturbances in the atmosphere	X X X	X X			10
Fronts		X			KZV
Cloud interpretation and classification		X			KZV
Interpreting information of meteorological instruments on board.		X			KZV
Knowledge of weather reports and interpretations of abbreviations and chart symbols	X			X	KZV
Tropical Cyclones: (N and S hemisphere) Origin, localities, season, frequency and lifecycle of a tropical cyclone. General Direction, warning of existence and approach. Precautions and avoidance Hurricane Navigation	X X X X X	X		X X	40
Jet Stream and 500 Hp level Definitions of: Isotherm Dew Point Relative Humidity		X X X	X		10
Climatological Charts and Atlases Ocean Currents Freakwaves Ice-conditions and icing	X	X X	X	X	10

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Main subject 6.1: Ship construction, rigging and equipment GZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Principles of ship construction	X				Is supposed to be knowledge from KZV,
Purpose and names from main construction parts of ships.	X				
Understanding of ship drawings			X		20% of this will be examined.
Methods of approved Shipping bureaus	X				
Watertight construction and freeboard			X		
First actions to be undertaken upon (partly) loss of watertight compartments	X				
Maintenance ship equipment	X X				
Dry docking and docking works	X				
Actions for preventing environmental pollution			X		
Safety while working on board	X		X		
Equipment according to shipping law and the use of it.	X				
Fire and smoke detection, alarm installation		X			
Main fire extinguish installation					
Purpose	X				
Lay-out	X				
Operation	X				
Rope and wire	X				

Main subject 6.2: Shipbuilding, rig and equipment Sailing Vessels GZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Historical development of sailing vessels, in design and construction.			X		10
Materials used in ship hull construction and rigging		X			15
Environmental forces on ship and rigging	X				15
Calculations on the strength of standing rigging	X				
Calculations on the strength of running rigging, pulling strain	X				15
Knowledge of materials and their function in standing and running rigging	X				15
Knowledge of overload in rigging, safety factors		X			10

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Main subject 7: Seakeeping and advanced ship manoeuvring GZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Propulsion: Functioning Propeller types Twin screw	X X X	X	X		4
Rudder: Functioning Types Forces	X X		X		2
Wheel house poster		X			2
Standing watch and hand over. Bridge watchkeeping directions	X		X		10
Manoeuvring Preparation Rope handling No wind, no current With wind / current Arrival at/ departure from a berth. Arrival / departure mooring buoy.	X X X X X X	X	X X X X X		5
Anchoring Preparation Dropping anchor Heaving anchor Mooring and span mooring	X		X X X		5
Heavy weather manoeuvring Heaving to/ scudding/laying a hull Grounding	X		X		2
Entering a port with a cross current	X		X		4
MOB manoeuvres		X	X		4
Manoeuvring constricted waters Sailing passing a vessel on opposite course Overtaking a vessel Passing through a lock	X X		X X X		5
Towing and being towed	X	X	X		20
Boarding the pilot	X		X		5
Methods to retrieve survivors	X				4
Sailing slow speed to reduce damage by bow and stern wave			X		2
Handling in ice and icing	X		X		2
Damage control		X	X		4
Taking steps after grounding			X		5
Emergencies Collision Fire Abandon ship	X X X		X X X		5

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Bridge Resource Management Location and use of equipment Effective communication Assertivity and leadership Situational awareness Be aware of team experiences	X		X		10
IAMSAR procedures	X	X			5

Main subject 8: Advanced Ship Stability GZV	Knowledge in facts	Understand- ing knowledge	Percep- tion	Practical skills	%
Static stability with an angle for use of stability information o/b	X				Is supposed to be knowledge from KZV, 20% of this will be examined.
Influence on stability of	X				
Freeboard	X				
Ship's breadth	X				
Displacement	X				
Definitions and correlation of	X				
Volume and displacement	X				
Centre of buoyancy	X				
Centre of gravity	X				
Height of metacentre	X				
Initial metacentric height	X				
Righting arm	X				
Base point	X				
Torque	X				
Moment	X				
Law of the moving base point	X				
Calculation of VCG	X				
Using moments	X				
Using GG' (shift of G)	X				
Using inclining test	X				
Importance of GM for stability	X				
Correlation between GM and roll period	X				
Characteristics of tender and stiff ship	X				
Causes of heel	X				
Means to neutralize heel	X		X		
Heeling moment due to giving helm	X				
Influence of free surface moment	X				
Course of centre of buoyancy and height of metacentre with increasing heeling angle	X				
Static stability curve	X				
Meaning of maximum righting arm and stability range	X				
Influence of ship's dimensions					
Calculation of stability- and heeling moment at small heeling angles Knowledge and practical use of statutory static stability criteria for sailing passenger vessels.	X		X		
Understanding of static stability particulars on board	X				
Knowledge and practical use of statutory static and dynamic stability criteria	X			X	

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Calculation of static stability (GZ) curves, stability – and heeling moments				X	10
Dynamic stability Windmoment, windarm (Residual) dynamic stability area Rolling in waves Calculation of heeling angle due to wind (gusts) and waves	X X X	X			20
Longitudinal stability Trim correction Moment to change trim 1 cm(MT1) Calculation of trim Influence of loading and unloading	X X X X	X			15
Stability during docking Stability while grounded		X X			5
Stability of cargo ships loading bulk grain Stowage factor Volumetric and Grain Heeling Moment Heeling arm curve Calculation of maximum heeling angle	X X		X X		15
Stability in damaged condition		X			5

Main subject 9: Rules of the road GZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Thourough knowledge	X				
Practical use			X		75
Use of radar in avoiding collisions	X		X		25

Main subject 10: Square rigged Sailing Ships and sailing ships routing GZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Sailing ships: Rigging: fore and aft rigged and square rigged Spars Sails Standing rigging Different ways of reefing Running rigging Rope and wire	X X X X X X X X	X X X			23
English and Dutch names of ships parts Sail manoeuvres in English and Dutch	X				4
How to use: Blocks Pennants Winches			X X X		4

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Wind:					
Aerodynamics	X	X			4
Propulsion forces	X	X			
Turbulence	X	X			
Wind tunnel effect	X	X			
Sailing	X				10
Sail names	X				
Rigging types	X				
Sail plan	X				
Centre of lateral resistance	X				
Centre of effort	X				
Clew	X				
Clew forces and design	X				
Manoeuvring under sail with square riggers and tall ships	X	X	X	X	25
Safety	X	X	X		20
Emergency procedures	X	X	X		
Voyage preparation					10
Knowledge	X				
Choose and describe a route, using different Navigation- Environmental- and safety standards			X	X	
Using ocean passages for the world				X	
Climatological charts				X	
Most important routes for sailing ships on the main oceans	X				
Most important wind- and sea currents	X				
Dangers of different routes	X				
Choosing of the correct longitude upon crossing the equator.	X				

Main subject 11: Stability of Sailing Ships GZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Understandings:					15
Static stability	X				
Dynamic stability	X				
Dynamical stability area	X				
Display in stability curve	X				
Stability requirements sailing ships		X			20
Static/dynamic stability	X				
Wind arm/Wind moment	X				
Stability booklet		X			
Ship's motions					15
Causes and influence on ship and crew		X			
Accelerations and sea sickness		X			
Influence of waves on stability					15
Static and dynamic processes		X			
Wave particulars		X			
Effect on stability for small and large ships		X			

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Influence of hull design on ship's motions		X			5
Energy balance of a ship in waves, potential and kinetic energy. Influence of mass moment of inertia and initial metacentric height on roll period. Relation between mass moment of inertia and dynamic stability Aerodynamic and hydrodynamic damping systems		X			15
Influence of heeling angle and trim on stability		X			5
Heeling moment on giving helm.		X			5
Judging the change of a capsizes and measurements to prevent a capsizes		X			5
Stability practical assessment	Assessment				

Main subject 12: Cargo Handling GZV	Knowledge in facts	Understanding knowledge	Perception	Practical skills	%
Use of the Displacement Scale Corrections for Specific Gravity of water Explaining common data	X X	X			10
Plimsoll marks Draft marks	X X	X X	X X		10
Calculating Stowage Capacity				X	10
Use of Capacity plan				X	5
Transporting goods: Measures Weights Definitions	X X X				5
Making a Cargo Stowage Plan				X	5
Preparing loading and unloading (<i>General and on Sailing vessels</i>) Checks to be performed Calculations Loading Unloading Specific cargo - Liquid cargo - Bulk cargo - Dangerous goods - Heavy loads - Refrigerated cargo Preventing damage to cargo Lashing-, dunnage and Stevedores materials Temperature measuring and venting of cargo	X X X	X X X X X X X	X X		25

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Measuring apparatus	X				
Setup and use of	X	X		X	5
- IMSBC code	X	X		X	
- IMDG code					
Preventing environmental pollution	X	X			10
Transporting cargo under sail		X			15