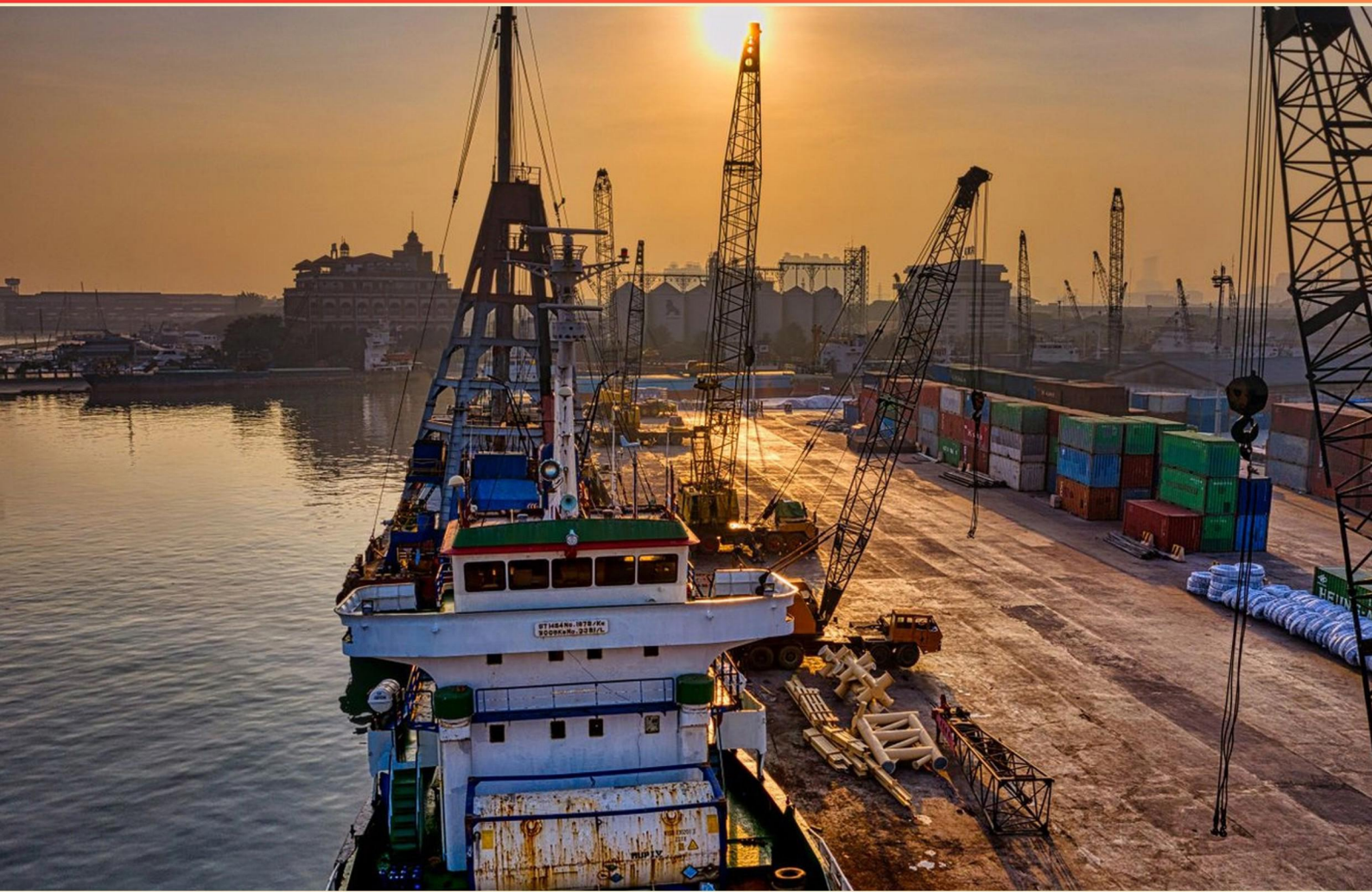


# **GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS) ELEMENT 1 PRACTICE EXAM (SAMPLE) STUDY GUIDE**



## **SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR  
THE FULL VERSION STUDY GUIDE**

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# Table of Contents

|                             |    |
|-----------------------------|----|
| Copyright .....             | 1  |
| Table of Contents .....     | 2  |
| Introduction .....          | 3  |
| How to Use This Guide ..... | 4  |
| Questions .....             | 5  |
| Answers .....               | 8  |
| Explanations .....          | 10 |
| Next Steps .....            | 15 |

SAMPLE

# Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

# How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

## 1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

## 2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

## 3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

## 4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

## 5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

## 6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

## Questions

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- 1. Which action best reduces reception of unwanted NAVTEX broadcasts?**
  - A. Increase the transmitter power.
  - B. Programming the NAVTEX receiver to reject unwanted broadcasts.
  - C. Disable NAVTEX entirely.
  - D. Change to a different frequency.
- 2. What is the minimum radio operator requirement for ships subject to the Great Lakes Radio Agreement?**
  - A. Marine Radio Operator Permit
  - B. Radiotelephone Operator Certificate
  - C. Marine Radio Operator Credential
  - D. Radio Operator Permit
- 3. When a watch is required on 2182 kHz, at which minutes past the hour must a 3-minute silent period be observed?**
  - A. 00 and 30
  - B. 15 and 45
  - C. 05 and 35
  - D. 10 and 40
- 4. Which ships must carry radio equipment for safety of life at sea according to international agreement?**
  - A. All ships.
  - B. Cargo ships over 1000 gross tons.
  - C. Cargo ships over 300 gross tons and vessels carrying more than 12 passengers.
  - D. Fishing vessels under 100 tons.
- 5. What is the antenna requirement of a radiotelephone installation aboard a passenger vessel?**
  - A. The antenna must be vertically polarized and as non-directional and efficient as practicable for the transmission and reception of ground waves over seawater.
  - B. The antenna must be left unshielded
  - C. The antenna must be horizontally polarized and shaped to cover all azimuths
  - D. The polarization is not specified

**6. Which distance range describes the typical NAVTEX transmitting range?**

- A. 150-250 nautical miles
- B. 400-600 nautical miles
- C. 100-150 nautical miles
- D. 200-400 nautical miles

**7. Under what condition may the operator of a ship radio station allow an unlicensed person to speak over the transmitter?**

- A. When under the supervision of the licensed operator.
- B. Whenever a passenger requests to speak.
- C. Only during emergencies.
- D. Never.

**8. What is the transmitting range of most NAVTEX stations?**

- A. 50-150 nautical miles
- B. 600-1000 nautical miles
- C. 100-200 nautical miles
- D. Typically 200-400 nautical miles (360-720 km)

**9. Which modulation mode is suitable for MF/HF voice operations?**

- A. J3E
- B. F1B
- C. J2B
- D. A1A

**10. What is a Safety transmission?**

- A. A transmission indicating weather warnings only.
- B. A communications transmission which indicates that a station is preparing to transmit an important navigation or weather warning.
- C. A distress signal.
- D. A routine position report.

## **Answers**

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1. B
2. A
3. A
4. C
5. A
6. D
7. A
8. D
9. A
10. B

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## **Explanations**

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### 1. Which action best reduces reception of unwanted NAVTEX broadcasts?

- A. Increase the transmitter power.
- B. Programming the NAVTEX receiver to reject unwanted broadcasts.**
- C. Disable NAVTEX entirely.
- D. Change to a different frequency.

*Controlling what NAVTEX messages you receive is handled by the receiver's filtering options. NAVTEX receivers can be programmed to ignore certain broadcasts based on station, region, or message type, so you only receive the information you actually want. This selective filtering is the most effective way to reduce unwanted NAVTEX content because it lowers clutter without sacrificing access to the essential NAVTEX broadcasts. Increasing transmitter power would simply amplify both wanted and unwanted signals, making the problem worse. Disabling NAVTEX altogether would stop all NAVTEX messages, not just the unwanted ones, which isn't practical for ongoing safety and navigation information. Changing to a different frequency isn't a reliable fix either, since NAVTEX operates on fixed frequencies and regional variations can still bring in the same or different unwanted broadcasts.*

### 2. What is the minimum radio operator requirement for ships subject to the Great Lakes Radio Agreement?

- A. Marine Radio Operator Permit**
- B. Radiotelephone Operator Certificate
- C. Marine Radio Operator Credential
- D. Radio Operator Permit

*The main idea is that ships governed by the Great Lakes Radio Agreement must have a Marine Radio Operator Permit on board as the baseline credential for operating the vessel's radio equipment. This FCC-issued permit proves the operator understands essential maritime radio procedures, regulatory requirements, distress signaling, and the proper use of radio channels. It is the recognized minimum credential used under the Great Lakes Agreement. Other terms you might see for different licenses exist, but they are not the official minimum credential referenced by GLRA for ships on the Great Lakes.*

### 3. When a watch is required on 2182 kHz, at which minutes past the hour must a 3-minute silent period be observed?

- A. 00 and 30**
- B. 15 and 45
- C. 05 and 35
- D. 10 and 40

*On the 2182 kHz MF distress/calling watch, there is a mandated three-minute silent period to keep the channel clear and allow other stations to break in or to monitor for traffic. This quiet window is scheduled at fixed times to create a predictable pattern, specifically at the top of the hour and at the half-hour mark. So the three-minute silence must begin at the exact minutes past the hour of 00 and 30, i.e., from 00:00 to 00:03 and from 00:30 to 00:33 each hour. Other times would break this standard cadence, which is why those two moments are the correct ones.*

**4. Which ships must carry radio equipment for safety of life at sea according to international agreement?**

- A. All ships.
- B. Cargo ships over 1000 gross tons.
- C. Cargo ships over 300 gross tons and vessels carrying more than 12 passengers.**
- D. Fishing vessels under 100 tons.

*International rules set who must have radio equipment based on size and passenger capacity, so those vessels most in need of reliable distress and safety communications are covered. The threshold used is cargo ships of 300 gross tons or more, and any vessel carrying more than 12 passengers. This combination matches the standard international requirement: larger cargo ships and any passenger-carrying ships must carry radio equipment to ensure they can send distress signals and communicate for safety of life at sea. Smaller fishing vessels (under 100 tons) and ships that don't meet the tonnage or passenger criteria aren't mandated to install such equipment, and requiring all ships would be unnecessarily broad.*

**5. What is the antenna requirement of a radiotelephone installation aboard a passenger vessel?**

- A. The antenna must be vertically polarized and as non-directional and efficient as practicable for the transmission and reception of ground waves over seawater.**
- B. The antenna must be left unshielded
- C. The antenna must be horizontally polarized and shaped to cover all azimuths
- D. The polarization is not specified

*The essential idea is that shipboard radiotelephone antennas are designed to be vertical and essentially omnidirectional in the horizontal plane to maximize ground-wave propagation over seawater and to provide uniform coverage in all directions. Vertical polarization aligns well with how ground waves travel along the sea surface, allowing efficient transmission and reception over water. An omnidirectional (non-directional) pattern means the signal strength is similar in all horizontal directions, which is crucial for a moving vessel that must communicate with stations in many different directions without constantly reorienting the antenna. The phrase "as efficient as practicable" recognizes the practical limits of shipboard installations, but the goal remains a vertically polarized, non-directional antenna for reliable radiotelephone service over the sea. Horizontal polarization would not couple as effectively to the sea surface for ground-wave propagation and would typically require a more complex, directionally tuned pattern, which is not desirable for general maritime use. Polarization is specified because, for reliable GMDSS radiotelephony in marine environments, the standard practice is a vertically polarized, omnidirectional antenna. Shielding is not a defining requirement here, and leaving polarization unspecified would not meet the standard operating practice.*

**6. Which distance range describes the typical NAVTEX transmitting range?**

- A. 150-250 nautical miles
- B. 400-600 nautical miles
- C. 100-150 nautical miles
- D. 200-400 nautical miles**

NAVTEX broadcasts on 518 kHz and relies on ground/surface-wave propagation over the sea, so its coverage is centered on coastal and near-coastal waters. The practical area it can reach depends on transmitter power, antenna efficiency, sea conductivity, and atmospheric conditions, but for typical coastal NAVTEX installations the messages are received out to roughly 200 to 400 nautical miles from the transmitter. This makes 200–400 nautical miles the standard or typical transmitting range. Options that suggest much shorter or much longer ranges don't align with how 518 kHz NAVTEX signals behave in real-world coastal service.

**7. Under what condition may the operator of a ship radio station allow an unlicensed person to speak over the transmitter?**

- A. When under the supervision of the licensed operator.**
- B. Whenever a passenger requests to speak.
- C. Only during emergencies.
- D. Never.

The key rule is that transmitting is restricted to licensed personnel, and an unlicensed person may speak over the transmitter only when directly supervised by the licensed operator. This supervision keeps the operator in control of the transmitter, ensuring proper use of the frequency, correct call signs, and adherence to procedures and regulations. So if an unlicensed person is to speak, the licensed operator must be actively supervising and guiding the transmission. That's why simply because a passenger asks to speak isn't enough—the supervisor must be present and in control. It isn't limited only to emergencies, since the requirement applies whenever an unlicensed person speaks, though emergency communications would still be conducted under supervision. And it's not never—the rule allows supervised participation by an unlicensed person.

**8. What is the transmitting range of most NAVTEX stations?**

- A. 50-150 nautical miles
- B. 600-1000 nautical miles
- C. 100-200 nautical miles
- D. Typically 200-400 nautical miles (360-720 km)**

NAVTEX broadcasts are low-frequency, coastally focused transmissions designed to cover ships within a few hundred miles of the transmitter. The range is determined by ground-wave propagation along the sea and the transmitter power, so most coastal NAVTEX stations are received roughly within 200 to 400 nautical miles (about 360–720 km). This distance is typical for ensuring that ships in approach lanes and near shipping routes can reliably receive MSI messages. Signals extending beyond this range are unlikely with standard NAVTEX setups, while much shorter ranges don't align with how NAVTEX is intended to serve vessels along coastlines.

## 9. Which modulation mode is suitable for MF/HF voice operations?

- A. J3E
- B. F1B
- C. J2B
- D. A1A

Single-sideband with suppressed carrier is the most efficient way to carry voice on MF/HF for long-range communications. J3E specifies SSB with a 3 kHz channel, which minimizes wasted power in the carrier and in redundant sidebands while using a bandwidth that matches standard MF/HF voice channels. This combination gives the best balance of audio quality, spectral efficiency, and long-range performance, which is why it's the standard choice for MF/HF voice operations. AM with a carrier (A1A) uses wider bandwidth and more transmitter power, making it less efficient for HF voice. FM (F1B) is excellent for VHF/UHF and offers good noise immunity, but its larger instantaneous bandwidth and different propagation characteristics aren't ideal for MF/HF voice. The narrower SSB option (J2B) exists, but 3 kHz channels are the common standard for MF/HF voice, so J3E best fits typical practice.

## 10. What is a Safety transmission?

- A. A transmission indicating weather warnings only.
- B. A communications transmission which indicates that a station is preparing to transmit an important navigation or weather warning.
- C. A distress signal.
- D. A routine position report.

A Safety transmission is a pre-announcement signaling that important safety information will follow. In GMDSS, when a station has a navigation or weather warning that could affect safety of navigation, it uses a Safety transmission to alert other stations that the upcoming message is of safety significance. This helps listeners prepare to receive the critical information. It's not a distress signal, and it's not a routine position report. The content that follows after a Safety transmission is the actual navigational or weather warning, which could influence how vessels operate in the area. So the Safety transmission serves as a heads-up that crucial safety information is about to be transmitted.

## Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at [hello@examzify.com](mailto:hello@examzify.com).

Or visit your dedicated course page for more study tools and resources:

<https://gmdsselement1.examzify.com>

We wish you the very best on your exam journey. You've got this!

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