

GMDSS FCC Element 7 Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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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 of the following represents the correct Inmarsat-C entry for a fax machine number in the United Kingdom?**
 - A. 44 1424-8821-902**
 - B. 4414248821902#**
 - C. 44+ 14248821902+**
 - D. 4414248821902**

- 2. In VHF communication, what term is used for the primary method of wave propagation?**
 - A. A. Tropospheric Scattering**
 - B. B. Skywave Propagation**
 - C. C. Line-of-Sight Propagation**
 - D. D. Surface Wave Propagation**

- 3. Which longitude corresponds to the POR satellite location for Inmarsat-B/C communications?**
 - A. 64E**
 - B. 15.5W**
 - C. 54W**
 - D. 178E**

- 4. When using SafetyNET™ for MSI receipt, what is true about Urgency and Distress messages?**
 - A. Only unscheduled Urgency and Distress messages will be received if not logged in**
 - B. Both scheduled MSI and unscheduled messages will be received if logged in**
 - C. All of these answers are correct**
 - D. The Inmarsat-C SES must have Enhanced Group Calling capability to receive MSI**

- 5. What is the correct response after a false distress alert is sent on 8 MHz frequency?**
 - A. Make a call on 8291.0 kHz**
 - B. Cancel it with "MAYDAY"**
 - C. Use all TELEX channels**
 - D. Communicate through Inmarsat**

- 6. Which frequency should a ship use to monitor for DSC alerts?**
- A. VHF Channel 16 only.**
 - B. 2187.5 kHz.**
 - C. Both Channel 70 and Channel 16.**
 - D. 12 MHz DSC frequency only.**
- 7. What sequence of ARQ codes is used for manual over, end of message text, and end of connection to land destination terminal?**
- A. NNNN, KKKK, GA+**
 - B. KKKK, DIRTLX, NNNN**
 - C. +?, NNNN, KKKK**
 - D. +?,, BRK+**
- 8. Which of the following systems is least susceptible to fading or static interference?**
- A. A. HF SITOR (NBDP)**
 - B. B. MF-HF DSC Controller**
 - C. C. VHF ARQ**
 - D. D. Inmarsat**
- 9. What is the purpose of a Distress call in the GMDSS system?**
- A. To request routine communications with a nearby vessel.**
 - B. To alert authorities of an emergency situation requiring immediate assistance.**
 - C. To inform other vessels of navigational hazards.**
 - D. To share information about weather conditions.**

10. Which frequencies and modes are allocated for Distress alerting in GMDSS?

- A. 406 MHz via EPIRB, 1626.5-1645.5 MHz via Inmarsat and Channel 70 DSC plus six (6) MF/HF DSC frequencies.**
- B. 1626.5-1645.5 MHz via Inmarsat, VHF CH-16 plus six (6) MF/HF DSC frequencies, 406 MHz via EPIRB.**
- C. Channel 70 DSC plus six (6) MF/HF DSC frequencies, 7 voice follow-on and 6 telex follow-on frequencies.**
- D. Mayday on VHF Channel 70 and the other six voice follow-on frequencies.**

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Answers

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

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Explanations

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1. Which of the following represents the correct Inmarsat-C entry for a fax machine number in the United Kingdom?

- A. 44 1424-8821-902**
- B. 4414248821902#**
- C. 44+ 14248821902+**
- D. 4414248821902**

The correct representation for an Inmarsat-C entry for a fax machine number in the United Kingdom typically follows a specific format that adheres to international dialing standards. The answer provided includes the country code for the United Kingdom, which is 44, followed directly by the local number without any additional formatting symbols like spaces or punctuations, making it suitable for the system to recognize without confusion. Inmarsat-C systems are designed to handle numbers in a straightforward numerical format, thus efficiency and clarity are paramount. The given answer incorporates the country code and local number in a seamless format which is often required for smooth communication. While other options may provide variations with extra characters such as symbols or spaces, these can complicate the dialing process and potentially lead to connection issues. The lack of those elements in the correct answer makes it the most suitable choice for dialing standards, ensuring precise routing of the fax communication through the Inmarsat-C satellite system.

2. In VHF communication, what term is used for the primary method of wave propagation?

- A. A. Tropospheric Scattering**
- B. B. Skywave Propagation**
- C. C. Line-of-Sight Propagation**
- D. D. Surface Wave Propagation**

In VHF communication, the primary method of wave propagation is line-of-sight propagation. This term refers to the transmission of radio waves between two points that are in direct visual contact with each other, without any significant obstructions. VHF waves typically operate in the frequency range of 30 MHz to 300 MHz, where the curvature of the Earth plays a significant role in limiting connectivity. For effective communication, both the transmitting and receiving antennas need to be at a height sufficient to avoid any barriers. Line-of-sight propagation is most effective in situations where there are no obstacles like hills, buildings, or heavy foliage that might deflect or absorb the radio waves. This method is particularly important for marine communications, where many vessels rely on VHF radios to maintain contact with each other and with shore stations. While other propagation methods, such as tropospheric scattering and surface wave propagation, are used in different contexts or circumstances, they are not the primary means of propagation for VHF communications compared to line-of-sight. Skywave propagation is also not applicable in the VHF range, as it primarily pertains to higher frequency communications where the ionosphere reflects radio waves back to Earth.

3. Which longitude corresponds to the POR satellite location for Inmarsat-B/C communications?

- A. 64E
- B. 15.5W
- C. 54W
- D. 178E**

The Inmarsat-B/C satellite system operates from specific geostationary orbital positions to provide communication services, including maritime communications. For the Inmarsat satellites, they are positioned at certain longitudes above the equator, where they maintain a fixed position relative to the Earth. The correct longitude for the Inmarsat-B/C satellite location is 178E. This orbital position allows the satellites to provide optimal coverage for maritime communication in various regions, including the Pacific Ocean and areas around the Americas and Asia. This positioning is critical because it ensures that vessels at sea can maintain reliable and continuous communication for safety and operational purposes. The other options represent different longitudes that do not correspond to the known geostationary positions for Inmarsat-B/C satellites, making them incorrect choices in this context. Understanding the specific orbital positions of communication satellites is vital for ensuring the efficiency and reliability of maritime communication services.

4. When using SafetyNETTM for MSI receipt, what is true about Urgency and Distress messages?

- A. Only unscheduled Urgency and Distress messages will be received if not logged in
- B. Both scheduled MSI and unscheduled messages will be received if logged in
- C. All of these answers are correct**
- D. The Inmarsat-C SES must have Enhanced Group Calling capability to receive MSI

The choice indicating that all of these answers are correct accurately summarizes the functionality and requirements of using SafetyNETTM for Maritime Safety Information (MSI) receipt. When logged in to SafetyNETTM, vessels are able to receive both scheduled MSI messages and unscheduled messages, including those categorized as Urgency and Distress messages. This capability is critical for ensuring that maritime safety remains a top priority, as it allows vessels to be aware of any immediate threats or important information they need to act upon without unnecessary delay. Moreover, the Enhanced Group Calling capability of the Inmarsat-C Ship Earth Station (SES) plays a vital role in facilitating the reception of MSI. This ensures that vessels can not only receive standard messages but also benefit from a more robust and reliable communication infrastructure that can handle Urgency and Distress messages effectively. Thus, all the statements presented in the options contribute to a comprehensive understanding of how SafetyNETTM operates in delivering important MSI messages, reinforcing the notion that the selected answer encapsulates the full extent of the messaging capabilities within the SafetyNETTM system.

5. What is the correct response after a false distress alert is sent on an 8 MHz frequency?

- A. Make a call on 8291.0 kHz**
- B. Cancel it with "MAYDAY"**
- C. Use all TELEX channels**
- D. Communicate through Inmarsat**

The correct response to a false distress alert initiated on an 8 MHz frequency involves the established procedures for cancelling such alerts. When a false distress alert is sent, the appropriate course of action is to issue a cancellation message via the same frequency the alert was originally sent. This effectively informs all stations monitoring that the distress alert was sent in error. The option to make a call on 8291.0 kHz refers to a specific frequency used for maritime communication, which would be an appropriate means to communicate concerning the false alert. However, directly addressing the alert on the same frequency would usually be more effective as it ensures that the cancellation reaches the intended audience. Cancelling a false distress alert cannot be properly done by using "MAYDAY," as that term specifically indicates an emergency. This term is reserved for genuine distress situations and using it for cancelling a false alert could create further confusion among other maritime operators. While using all TELEX channels or communicating through Inmarsat could be utilized for additional communication needs or routine operational messages, they do not directly address the immediate need to cancel the false alert effectively and promptly as required by maritime communication protocols. In summary, the action required to properly and promptly handle a false distress alert on an 8 MHz frequency is

6. Which frequency should a ship use to monitor for DSC alerts?

- A. VHF Channel 16 only.**
- B. 2187.5 kHz.**
- C. Both Channel 70 and Channel 16.**
- D. 12 MHz DSC frequency only.**

Monitoring for DSC (Digital Selective Calling) alerts is essential for maritime communication safety. Ships should monitor specific frequencies designated for DSC use to ensure they can receive distress and safety messages. Channel 70, specifically designated for DSC, operates at a frequency of 156.525 MHz and is solely dedicated to receiving DSC messages. It is where vessels can receive alerts for distress situations, which is crucial for responding quickly to emergencies at sea. VHF Channel 16 is primarily used for voice communications and is where a lot of emergency and safety calls occur. By monitoring both Channel 70 and Channel 16, a ship can effectively cover both DSC alerts and traditional voice communication, ensuring it does not miss any critical messages. In contrast, while the other frequency options have their own importance, they do not cover the same range of DSC alerts as effectively as the combination of Channel 70 and Channel 16. For instance, VHF Channel 16 is crucial for voice distress communications but is not specifically designated for DSC. The frequency 2187.5 kHz is used for DSC on HF (High Frequency) but does not encompass the broader spectrum of monitoring responsibilities that monitoring both VHF and DSC channels would entail. Therefore, the combination of Channel 70 and

7. What sequence of ARQ codes is used for manual over, end of message text, and end of connection to land destination terminal?

- A. NNNN, KKKK, GA+
- B. KKKK, DIRTLX, NNNN
- C. +?, NNNN, KKKK**
- D. +?,, BRK+

The sequence of ARQ codes used for manual operation, the end of message text, and the end of connection to the land destination terminal is represented by the chosen answer. The first code, "+?", is a request indicating that the operator needs to clarify or confirm something; this is often used in manual transmission situations where operator interaction is necessary. The second code, "NNNN," serves as a standard way to indicate the end of a message text, signaling that the content has been fully delivered. Finally, "KKKK" indicates the end of the connection to the land terminal, effectively terminating the communication session. This understanding is crucial for operators in maritime communication, particularly in utilizing the GMDSS (Global Maritime Distress and Safety System) effectively for safety and operational efficiency at sea. Each part of the ARQ code sequence is specifically tailored to facilitate clear communication in maritime operations, ensuring that messages are understood and that connections can be gracefully concluded.

8. Which of the following systems is least susceptible to fading or static interference?

- A. A. HF SITOR (NBDP)
- B. B. MF-HF DSC Controller
- C. C. VHF ARQ
- D. D. Inmarsat**

The Inmarsat system is least susceptible to fading or static interference primarily because it operates using satellites in geostationary orbit, which provide consistent and reliable communication. The use of satellites allows signals to bypass many of the atmospheric disturbances and interference issues that affect ground-based communication systems, especially those relying on high-frequency (HF) or medium-frequency (MF) bands. In contrast, systems like HF SITOR (NBDP), MF-HF DSC Controller, and VHF ARQ are more prone to challenges like fading and static interference due to their reliance on terrestrial propagation. High-frequency signals, for example, can be heavily influenced by factors such as ionospheric conditions, distance, and the physical environment, leading to signal degradation and quality issues. Similarly, while VHF signals can offer good performance over short distances, they also can suffer from multipath interference and other environmental factors. Overall, the satellite-based Inmarsat system is engineered for robustness against these types of interferences, making it the best choice for stable and reliable communication.

9. What is the purpose of a Distress call in the GMDSS system?

- A. To request routine communications with a nearby vessel.**
- B. To alert authorities of an emergency situation requiring immediate assistance.**
- C. To inform other vessels of navigational hazards.**
- D. To share information about weather conditions.**

The purpose of a Distress call in the GMDSS (Global Maritime Distress and Safety System) is to alert authorities and nearby vessels of an emergency situation that requires immediate assistance. When a vessel sends out a Distress call, it communicates that there is a critical situation, such as an accident, fire, grounding, or any scenario where lives or property are in danger. This call is a vital component of maritime safety as it prompts the closest ships and rescue authorities to respond quickly, helping to save lives and mitigate potential losses. GMDSS provides specific protocols for issuing Distress calls, ensuring clarity and urgency in the message being sent. The other options pertain to communication scenarios that are important but do not represent emergency situations that necessitate immediate assistance. Regular communications, navigational hazards, or weather information have their own protocols and do not carry the same level of urgency or critical response requirement associated with a Distress call.

10. Which frequencies and modes are allocated for Distress alerting in GMDSS?

- A. 406 MHz via EPIRB, 1626.5-1645.5 MHz via Inmarsat and Channel 70 DSC plus six (6) MF/HF DSC frequencies.**
- B. 1626.5-1645.5 MHz via Inmarsat, VHF CH-16 plus six (6) MF/HF DSC frequencies, 406 MHz via EPIRB.**
- C. Channel 70 DSC plus six (6) MF/HF DSC frequencies, 7 voice follow-on and 6 telex follow-on frequencies.**
- D. Mayday on VHF Channel 70 and the other six voice follow-on frequencies.**

The correct response identifies the designated frequencies and modes specifically allocated for distress alerting within the Global Maritime Distress and Safety System (GMDSS). To break down the components mentioned: - ****406 MHz via EPIRB****: The 406 MHz frequency is used for emergency position-indicating radio beacons (EPIRBs), which are key for alerting search and rescue services during a maritime emergency. - ****1626.5-1645.5 MHz via Inmarsat****: This frequency range is associated with the Inmarsat system, which provides satellite communications for distress alerts. It is crucial for ensuring that vessels can communicate distress messages when they are out of VHF range. - ****Channel 70 DSC****: The Digital Selective Calling (DSC) on VHF Channel 70 is specifically allocated for distress, urgency, and safety communications, making it part of the essential framework for alerting in emergencies. - ****Six MF/HF DSC frequencies****: These frequencies provide additional methods for implementing distress alerts over Medium Frequency (MF) and High Frequency (HF) radio frequencies, ensuring robust communication options for vessels at sea. By incorporating the specified frequencies and systems, the correct answer accurately identifies the full scope of distress alert

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.

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

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

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