Federal Communications Commission (FCC) Element 1 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

1. What regulations govern the use and operation of FCC-licensed ship stations in international waters?

A. The regulations of the International Maritime Organization (IMO) and Radio Officers Union.

B. Part 80 of the FCC Rules plus the international Radio Regulations and agreements to which the United States is a party.

C. The Maritime Mobile Directives of the International Telecommunication Union.

D. Those of the FCC's Wireless Telecommunications Bureau, Maritime Mobile Service, Washington, DC 20554.

2. Which statement is NOT true regarding the requirements of survival craft portable two-way VHF radiotelephone equipment?

A. Watertight to a depth of 1 meter for 5 minutes.

B. Effective radiated power should be a minimum of 0.25 watts.

C. Operates simplex on Ch-70 and at least one other channel.

D. The antenna is fixed and non-removable.

3. Radio watches for compulsory radiotelephone stations will include which of the following?

A. VHF channel 22a continuous watch at sea.

B. 121.5 MHz continuous watch at sea.

C. VHF channel 16 continuous watch.

D. 500 kHz.

4. Where must ship station logs be kept during a voyage?

A. At the principal radiotelephone operating position.

B. They must be secured in the vessel's strongbox for safekeeping.

C. In the personal custody of the licensed commercial radio operator.

D. All logs are turned over to the ship's master when the radio operator goes off duty.

5. In case of loss of main and emergency electrical power, what term describes the source needed for GMDSS power?

A. Emergency power.

B. Ship's emergency diesel generator.

C. Reserve source of energy.

D. Ship's standby generator.

6. What comprises a complete Distress message?

A. Name of the vessel, weather conditions, and crew size

B. Time of day, nature of distress, and vessel's position

C. Name of the vessel, call sign, and nature of distress

D. Details of the vessel's last known location

7. Radiotelephone stations required to keep logs of their transmissions must include:

A. Station, date and time.

B. Name of operator on duty.

C. Station call signs with which communication took place.

D. All of these.

8. What are the mandatory DSC watchkeeping bands/channels?

A. VHF Ch-70, 2 MHz MF DSC, 6 MHz DSC and 1 other HF DSC.

B. 8 MHz HF DSC, 1 other HF DSC, 2 MHz MF DSC and VHF Ch-70.

C. 2 MHz MF DSC, 8 MHz DSC, VHF Ch-16 and 1 other HF DSC.

D. None of the above.

9. Which condition must be reported to the Master in a 2182 kHz radiotelephone system?

A. A much higher noise level during daytime operation.

B. No power output indication when speaking into the microphone.

C. Improper testing when the distress frequency watch receiver becomes unmuted.

D. Failure to contact a shore station 600 nautical miles distant.

10. What is the COSPAS-SARSAT system?

A. A global satellite communications system for users in the maritime, land and aeronautical mobile services.

B. An international satellite-based search and rescue system.

C. A broadband military satellite communications network.

D. A Wide Area Geostationary Satellite program (WAGS).

Answers

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

Explanations

1. What regulations govern the use and operation of FCC-licensed ship stations in international waters?

A. The regulations of the International Maritime Organization (IMO) and Radio Officers Union.

B. Part 80 of the FCC Rules plus the international Radio Regulations and agreements to which the United States is a party.

C. The Maritime Mobile Directives of the International Telecommunication Union.

D. Those of the FCC's Wireless Telecommunications Bureau, Maritime Mobile Service, Washington, DC 20554.

The correct answer highlights the importance of both domestic and international regulations concerning FCC-licensed ship stations operating in international waters. Specifically, Part 80 of the FCC Rules establishes the framework for maritime communications within the U.S. jurisdiction, focusing on the licensing and operation of equipment used on vessels. In addition to these national rules, the international Radio Regulations set forth by the International Telecommunication Union (ITU) come into play. These regulations are critical for ensuring that maritime communication systems operate effectively and safely on a global scale, allowing for interoperability among different countries' maritime services. Since the United States is a signatory to various international agreements, compliance with these regulations is necessary for U.S. ship stations to communicate while in international waters. Thus, understanding both the FCC's regulations and the broader context of international agreements provides a comprehensive legal basis for the operation of maritime communications. This dual framework reinforces the coordination between national and international authorities to uphold standards that protect safety and enhance communication efficiency at sea.

2. Which statement is NOT true regarding the requirements of survival craft portable two-way VHF radiotelephone equipment?

A. Watertight to a depth of 1 meter for 5 minutes.

B. Effective radiated power should be a minimum of 0.25 watts.

C. Operates simplex on Ch-70 and at least one other channel.

D. The antenna is fixed and non-removable.

The statement that is NOT true regarding the requirements of survival craft portable two-way VHF radiotelephone equipment is that it operates simplex on Ch-70 and at least one other channel. In reality, the equipment must be capable of operating on a designated distress channel, which is Channel 70. However, it is not restricted to simplex operation on just one other channel; instead, it should be able to communicate on multiple channels to ensure effective distress communication. Therefore, while it certainly operates on Channel 70, the requirement to operate on at least one other channel can include various channels, often allowing for duplex operation as well, depending on the equipment's design and the regulatory standards. Understanding this context emphasizes the flexibility and operational requirements of emergency communication systems and highlights the critical nature of being able to communicate on multiple channels to enhance survival chances in emergencies. The other statements accurately reflect the required features for the equipment; for example, being watertight supports functioning in adverse conditions, while a minimum effective radiated power ensures the signal can be transmitted over suitable distances.

3. Radio watches for compulsory radiotelephone stations will include which of the following?

A. VHF channel 22a continuous watch at sea.

B. 121.5 MHz continuous watch at sea.

C. VHF channel 16 continuous watch.

D. 500 kHz.

The correct answer is that radio watches for compulsory radiotelephone stations will include VHF channel 16 continuous watch. This frequency is designated as an international distress frequency and is used for emergency communications. All vessels equipped with VHF radiotelephones are required to monitor this channel at all times to ensure they can receive distress calls and assist in emergencies. VHF channel 16 serves as a standardized channel where any vessel or station can initiate a distress call or communicate safety information. The requirement to monitor VHF channel 16 helps enhance maritime safety by ensuring that all parties are aware of emergencies and can respond quickly. While VHF channel 22a has specific uses, it is not mandated for continuous watch in emergencies, and 121.5 MHz is primarily used for emergency locator beacons rather than regular maritime communications. Similarly, 500 kHz was historically used for maritime safety and distress communications but has largely been phased out in favor of more modern frequencies like VHF channel 16. Therefore, continuous monitoring of VHF channel 16 is essential for compliance with safety regulations and effective emergency response at sea.

4. Where must ship station logs be kept during a voyage?

A. At the principal radiotelephone operating position.

B. They must be secured in the vessel's strongbox for safekeeping.

C. In the personal custody of the licensed commercial radio operator.

D. All logs are turned over to the ship's master when the radio operator goes off duty.

Ship station logs must be kept at the principal radiotelephone operating position during a voyage to ensure that they are easily accessible and can be maintained properly as events occur. This location allows the licensed radio operator to record necessary communications and operational data accurately and immediately as required by regulations. Keeping logs at the principal operating position aids compliance with FCC rules, which mandate proper documentation of all communications for operational and safety purposes. Other options suggest alternative locations or arrangements that do not align with the requirement for immediate access and accurate record-keeping. For instance, securing logs in a strongbox or transferring them to the ship's master takes them away from the operating position, potentially leading to delays in recording critical information or in retrieving necessary documentation during emergencies. Having logs in personal custody may introduce a risk of loss or mismanagement, as logs need to be accessible to relevant personnel at all times for operational integrity and regulatory compliance.

5. In case of loss of main and emergency electrical power, what term describes the source needed for GMDSS power?

A. Emergency power.

B. Ship's emergency diesel generator.

C. Reserve source of energy.

D. Ship's standby generator.

The correct response is that the term used to describe the source needed for GMDSS (Global Maritime Distress and Safety System) power in case of loss of main and emergency electrical power is the reserve source of energy. This terminology is essential because it highlights the critical need for a backup power system that ensures communication equipment remains operational during distress situations. The GMDSS system, which is designed for the safety of life at sea, requires a reliable source of electrical power to function effectively at all times. A reserve source of energy can include batteries or alternative power supplies that are specifically set aside for this purpose. Using the term "reserve source of energy" accurately reflects the requirement for a reliable backup that can be accessed after the loss of primary power systems, ensuring that the ship can still send distress signals and maintain communication in emergencies, which is pivotal for mariner safety. Other options, while related, do not fully encompass the broader concept of having a dedicated backup system designed for emergency communication functions.

6. What comprises a complete Distress message?

A. Name of the vessel, weather conditions, and crew size

B. Time of day, nature of distress, and vessel's position

C. Name of the vessel, call sign, and nature of distress

D. Details of the vessel's last known location

A complete Distress message is critical for effective communication during emergencies at sea. It must provide essential information that enables rescuers to understand the situation and respond appropriately. The key components involve identifying the vessel in distress and articulating the nature of the distress. The correct answer includes the name of the vessel, call sign, and nature of distress. The name of the vessel allows rescuers to identify who is in need of assistance, while the call sign provides a standardized, recognizable identifier for communication purposes. Knowing the nature of the distress—whether it be sinking, fire, grounding, or other emergencies—helps search and rescue teams understand the urgency and the specific hazards they must prepare for. In contrast, while the other options mention various elements that could assist in understanding the situation, they do not present a complete message sufficient for initiating a distress call. For instance, details such as weather conditions or crew size may be relevant but are not essential for the immediate needs of the distress situation. Thus, option C succinctly encapsulates the essential elements required for a complete distress message.

7. Radiotelephone stations required to keep logs of their transmissions must include:

A. Station, date and time.

B. Name of operator on duty.

C. Station call signs with which communication took place.

D. All of these.

The requirement for radiotelephone stations to keep logs of their transmissions encompasses a comprehensive set of details that are crucial for regulatory compliance and operational accountability. Including the station name, date, and time of transmissions is essential because it establishes a clear record of when and where communications took place, which can be vital in case of investigations or audits. The name of the operator on duty is also a key component, as it allows for accountability and identification of personnel responsible for the communications during a given period. Knowing who was operating the station helps ensure that all transmissions are properly managed and can help trace any issues back to the individual responsible. Additionally, documenting the station call signs with which communication occurred is necessary for maintaining an accurate log of all interactions. This is important for compliance with FCC regulations, as it assists in tracking the flow of communications between different stations and can be useful for resolving disputes or confirming exchanges. Hence, the correct answer is comprehensive, as it combines all these elements—each an important aspect of the log-keeping requirements placed on radiotelephone stations by the FCC.

8. What are the mandatory DSC watchkeeping bands/channels?

A. VHF Ch-70, 2 MHz MF DSC, 6 MHz DSC and 1 other HF DSC.

B. 8 MHz HF DSC, 1 other HF DSC, 2 MHz MF DSC and VHF Ch-70.

C. 2 MHz MF DSC, 8 MHz DSC, VHF Ch-16 and 1 other HF DSC.

D. None of the above.

The correct answer highlights the mandatory DSC watchkeeping bands/channels. DSC, or Digital Selective Calling, is an essential feature of the Global Maritime Distress and Safety System (GMDSS) and is used for sending alerts and distress signals. The key channels mandated for DSC watchkeeping include VHF Channel 70, which is specifically designed for DSC calls, and the MF and HF bands, which are also critical for long-range communication, especially in maritime operations. In this context, the inclusion of 8 MHz HF DSC and 2 MHz MF DSC in the correct choice emphasizes the requirement for vessels to maintain a listening watch on both medium-frequency and high-frequency bands. This ensures that vessels can communicate effectively, especially when they are situated far from shore or in areas where VHF communications might be limited. The other options do not align correctly with the established guidelines for mandatory DSC watchkeeping channels, either by omitting key channels or by including incorrect frequencies not specified in the GMDSS requirements. Understanding the correct DSC channels is crucial for ensuring effective communication in emergencies at sea and enhances the safety of maritime operations.

9. Which condition must be reported to the Master in a 2182 kHz radiotelephone system?

A. A much higher noise level during daytime operation.

B. No power output indication when speaking into the microphone.

C. Improper testing when the distress frequency watch receiver becomes unmuted.

D. Failure to contact a shore station 600 nautical miles distant.

The situation involving no power output indication when speaking into the microphone is critical to report to the Master in a 2182 kHz radiotelephone system because it indicates a potential communication failure. This frequency is designated for distress and safety communications in maritime operations, and any failure in the system could result in serious consequences during emergencies. Effective communication is vital at sea, particularly in times of distress, so understanding that there is no power output means that the vessel may not be able to transmit messages or respond to calls for help. Reporting this condition allows for immediate attention and troubleshooting, ensuring that the vessel retains its ability to communicate effectively with other ships and shore stations. In contrast, while a higher noise level, improper testing of the receiver, or failure to contact a distant shore station could indicate operational issues, they do not directly imply an immediate breakdown of communication capability like the lack of power output does. The urgency and potential hazard associated with losing the ability to transmit make this situation a priority for reporting.

10. What is the COSPAS-SARSAT system?

A. A global satellite communications system for users in the maritime, land and aeronautical mobile services.

B. An international satellite-based search and rescue system.

C. A broadband military satellite communications network.

D. A Wide Area Geostationary Satellite program (WAGS).

The COSPAS-SARSAT system is accurately described as an international satellite-based search and rescue system. It was developed through a collaboration between multiple countries and organizations to provide a means for distress signal detection and localization for individuals in emergencies, including those at sea and in remote areas. The system consists of a network of satellites that receive signals from emergency beacons, which are designed to alert search and rescue services to a person's location in need of assistance. This system plays a critical role in enhancing safety for maritime, aviation, and terrestrial users by ensuring that distress signals are quickly sent to rescue authorities, facilitating a more efficient response. The focus is on international coordination, allowing for a global reach that benefits users regardless of their location. The other options do not accurately capture the primary function and purpose of COSPAS-SARSAT. While satellite communications systems can include various functions, COSPAS-SARSAT is specifically geared towards search and rescue operations. Similarly, the reference to a military network or a geostationary satellite program does not pertain to the COSPAS-SARSAT system's mission, which is focused solely on humanitarian assistance and emergency response.

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:

https://fccelement1.examzify.com

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