# ENLISTED SURFACE WARFARE SPECIALIST (ESWS) REACTOR PRACTICE TEST (SAMPLE)

## STUDY GUIDE

## SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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 are the main duties of the Reactor Mechanical Assistant (RMA)?**

A. Monitor air quality in reactors

B. Supervise the operation, care, and maintenance of the reactor plant

C. Coordinate with supply chain for spare parts

D. Manage training programs for crew

**2. What does EOS stand for?**

A. Emergency Operating System

B. Enclosed Operating Station

C. Electrical Operating Station

D. Environmental Operations Suite

**3. What is the pressure of low-pressure (LP) air?**

A. 150 psi

B. 400 psi

C. 100 psi

D. 200 psi

**4. What does the term "M" in reactor context refer to?**

A. Maintenance

B. Machinery

C. Management

D. Monitoring

**5. What does the acronym CRA stand for?**

A. Chief Reactor Assistant

B. Control Room Assistant

C. Chemistry/Radiological Assistant

D. Calibration Reactor Advisor

**6. Which of the following statements is true regarding nuclear power?**

A. It produces more noise than conventional fuels

B. It contributes significantly to air pollution

C. It offers more cargo room due to lower fuel needs

D. It requires more frequent refueling than fossil fuels

**7. What action is performed by the main condenser in the steam cycle?**

A. Generates more steam

B. Reduces pressure in the reactor

C. Condenses steam back into water

D. Recirculates water to the main engine

**8. What is the primary use of Control Air on a ship?**

A. Propulsion plant air

B. Electricity generation

C. Cooling system management

D. Fresh water production

**9. How many high-pressure air compressors (HPACs) are found in each MMR?**

A. One

B. Two

C. Three

D. Four

**10. What type and location of heat exchangers are the steam reboilers onboard?**

A. Vertical shell and U-tube type heat exchangers located in the engine room

B. Horizontal shell and U-tube type heat exchangers located on upper level of 1A and 4B shaft alleys

C. Horizontal fin type heat exchangers located throughout the reactor room

D. Vertical plate type heat exchangers located near the propeller drive

# Answers

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

# Explanations

## 1. What are the main duties of the Reactor Mechanical Assistant (RMA)?

A. Monitor air quality in reactors

B. Supervise the operation, care, and maintenance of the reactor plant

C. Coordinate with supply chain for spare parts

D. Manage training programs for crew

*The main duties of the Reactor Mechanical Assistant (RMA) primarily involve supervising the operation, care, and maintenance of the reactor plant. This responsibility requires a thorough understanding of the reactor's mechanical systems, ensuring that they operate correctly and safely. The RMA plays a critical role in monitoring system performance, identifying issues, and making necessary adjustments or repairs to maintain operational efficiency. Additionally, the RMA is involved in ensuring compliance with safety protocols and operational guidelines, which are vital in a reactor environment where safety cannot be compromised. Their expertise helps prevent mechanical failures that could impact the reactor's performance and safety. Other options, while relevant to overall reactor operation and maintenance, do not specifically align with the primary responsibilities of the RMA. Monitoring air quality, for instance, involves different roles and skills focused on environmental safety, while coordinating with supply chains relates more to logistics than direct operational supervision. Managing training programs is essential, but it typically falls under different personnel who focus on crew training and development rather than the immediate operational aspects of reactor maintenance and supervision.*

## 2. What does EOS stand for?

A. Emergency Operating System

B. Enclosed Operating Station

C. Electrical Operating Station

D. Environmental Operations Suite

*The term "EOS" refers to "Enclosed Operating Station." This terminology is used primarily in naval operations to designate a specific area or station where personnel can monitor and control various systems within a protective environment. An enclosed operating station is designed to ensure that operators are shielded from hazardous conditions while maintaining the ability to effectively manage equipment, systems, and respond to emergencies. In the context of ship operations, these stations are crucial for safeguarding personnel and ensuring operational continuity, especially within reactor or engineering spaces where the environment can be volatile. The design and function of the enclosed operating station allow for better safety protocols and response measures during critical operations. While the other choices might seem plausible at first glance, they do not accurately reflect the standard terminology recognized in naval operations related to reactor or engineering control environments. Thus, "Enclosed Operating Station" is the correct and relevant term in this context.*

## 3. What is the pressure of low-pressure (LP) air?

A. 150 psi

B. 400 psi

C. 100 psi

D. 200 psi

*Low-pressure (LP) air is commonly defined as air that operates at a pressure of around 150 psi. This specification is typically used in various naval applications, including systems for pneumatic control and other mechanical functions. Understanding this standard pressure is crucial for personnel working with systems that utilize LP air, ensuring safe and efficient operations. In naval environments, adhering to this pressure specification helps in maintaining compatibility with equipment and systems designed to work within these parameters. Knowing that low-pressure air is set at this value allows technicians and operators to troubleshoot and perform maintenance effectively, ensuring operational readiness and reliability of systems that depend on it.*

## 4. What does the term "M" in reactor context refer to?

A. Maintenance

B. Machinery

C. Management

D. Monitoring

*In the context of reactor terminology, the term "M" stands for Machinery. This is a critical aspect of reactor operations, as it encompasses all of the mechanical components and systems that are essential for the reactor's functionality. Machinery includes pumps, turbines, valves, and other equipment that facilitate the flow of cooling water, the movement of steam, and the overall operation of the reactor system. Understanding the machinery aspect is vital for personnel involved in reactor operations because maintaining and troubleshooting this equipment is crucial for ensuring safe and efficient reactor performance. An in-depth knowledge of the machinery helps in identifying potential issues, conducting repairs, and performing scheduled maintenance to prevent operational failures. The other options relate to important concepts in reactor operations but do not specifically define the "M" term in this context. Maintenance is related to the care and servicing of the machinery but is not the definition of "M." Management refers to the administrative aspects overseeing operations, while Monitoring involves the supervision and measurement of reactor systems but does not tie directly to the machinery aspect.*

## 5. What does the acronym CRA stand for?

A. Chief Reactor Assistant

B. Control Room Assistant

C. Chemistry/Radiological Assistant

D. Calibration Reactor Advisor

*The acronym CRA stands for Chemistry/Radiological Assistant. In the context of naval operations and reactor management, the Chemistry/Radiological Assistant plays a crucial role in monitoring and managing the chemical and radiological safety aspects of the reactor compartment. This position involves ensuring that the water chemistry is maintained at optimal levels for reactor operation, preventing corrosion and maintaining reactor performance. Additionally, this role includes monitoring radiation exposure levels to ensure compliance with safety standards and regulations, which is vital for the health and safety of personnel. Understanding the responsibilities of the Chemistry/Radiological Assistant is important in the operational framework of nuclear propulsion, as maintaining proper chemical balance and radiation safety is essential for safe and efficient reactor operation. Each of the other options represents roles that may exist within a naval reactor system, but they do not align with the specific responsibilities associated with the acronym CRA.*

## 6. Which of the following statements is true regarding nuclear power?

A. It produces more noise than conventional fuels

B. It contributes significantly to air pollution

C. It offers more cargo room due to lower fuel needs

D. It requires more frequent refueling than fossil fuels

*The statement regarding nuclear power that is true is the one that highlights its ability to offer more cargo room due to lower fuel needs. This is a significant advantage of nuclear propulsion over conventional fossil fuels. Nuclear reactors have a high energy density, which means they can produce a large amount of energy from a relatively small amount of fuel. As a result, vessels powered by nuclear energy do not need to carry as much fuel as those that rely on fossil fuels. This reduced fuel requirement allows for more space on board, which can be utilized for cargo, equipment, or other necessary components. In many naval applications, this aspect of nuclear propulsion is particularly beneficial, enabling longer missions without the logistical burden of frequent fuel resupply. The other statements do not accurately reflect the characteristics and advantages of nuclear power. While conventional fuels may produce more noise and contribute to air pollution, nuclear power does not share these downsides. Additionally, nuclear reactors require less frequent refueling compared to fossil fuel systems, further emphasizing their advantage in operational efficiency and extended range.*

## 7. What action is performed by the main condenser in the steam cycle?

A. Generates more steam

B. Reduces pressure in the reactor

C. Condenses steam back into water

D. Recirculates water to the main engine

*The main condenser plays a crucial role in the steam cycle by condensing steam back into water. This process is vital for the efficiency of the steam cycle because, after the steam has passed through the turbine and done its work, it needs to be converted back into liquid water to be reused in the cycle. In practical terms, the steam from the turbine enters the condenser where it is cooled, typically by seawater or another cooling medium. As the steam loses heat, it undergoes a phase change from gas back to liquid, resulting in water that can be pumped back to the steam generator or boiler. This not only allows for continuous operation within the system but also helps maintain a vacuum in the condenser, which contributes to the overall efficiency of the plant. By efficiently converting steam back to water, the main condenser ensures that the steam generator has a steady supply of feedwater. This function is fundamental to maintaining the cycle and ensuring that energy can be harnessed effectively for propulsion or electrical generation.*

## 8. What is the primary use of Control Air on a ship?

A. Propulsion plant air

B. Electricity generation

C. Cooling system management

D. Fresh water production

*The primary use of Control Air on a ship is to serve as propulsion plant air. Control air is treated compressed air that is utilized in various systems aboard naval vessels, particularly in the propulsion plant, to operate valves and controls that are crucial for the safe and efficient management of the engine room and other machinery areas. By using compressed air for these applications, the systems can maintain operational fluidity and ensure that the machinery responds effectively to the control systems in place. Control air is primarily involved in the functioning of pneumatic actuators, which are significant for regulating the flow of steam, coolant, and other critical fluids necessary for propulsion and plant operations. This system ensures that the reactor, steam generators, and associated equipment operate efficiently and safely, which is vital for overall ship performance. The other options focus on different aspects of ship operations, such as electricity generation, cooling systems, and fresh water production, but do not specifically pertain to the purpose of control air as it relates to propulsion plant operations.*

## 9. How many high-pressure air compressors (HPACs) are found in each MMR?

A. One

B. Two

C. Three

D. Four

*Each Main Machinery Room (MMR) on a naval vessel typically contains two high-pressure air compressors (HPACs). These compressors are essential for various functions, including providing the necessary air supply for starting gas turbines, operating pneumatic tools, and maintaining the vessel's air systems. Having two HPACs ensures redundancy and reliability. In the event of a failure with one compressor, the second can continue to supply high-pressure air, allowing operations to proceed without interruption. This design enhances the overall safety and effectiveness of the vessel's systems, reflecting best practices in engineering designs for critical operations aboard naval ships.*

**10. What type and location of heat exchangers are the steam reboilers onboard?**

A. Vertical shell and U-tube type heat exchangers located in the engine room

B. Horizontal shell and U-tube type heat exchangers located on upper level of 1A and 4B shaft alleys

C. Horizontal fin type heat exchangers located throughout the reactor room

D. Vertical plate type heat exchangers located near the propeller drive

*The steam reboilers onboard are classified as horizontal shell and U-tube type heat exchangers, which are specifically located on the upper level of the 1A and 4B shaft alleys. This configuration is designed to efficiently transfer heat within the systems while maximizing thermal exchange efficiency. The U-tube design allows for a compact structure and effective heat exchange between the primary and secondary fluids, which is crucial in maintaining optimal vessel operating conditions. Additionally, positioning these reboilers on the upper levels of the shaft alleys facilitates easier access for maintenance and operational checks, contributing to overall system reliability and performance. This specific design and location ensure that the heat exchangers can operate effectively in their designated environment, making it clear why this answer is the most accurate choice regarding the type and location of heat exchangers onboard.*

# 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://eswsreactor.examzify.com

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