MACHINIST'S MATE (MM) ADVANCEMENT PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE

https://mmadvancement.examzify.com

Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

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 16

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.

SAMPLE

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!

SAMPLE

Questions

SAMPLE

1. What are the three end points a steaming boiler has?

A. Pressure limit, water limit, safety limit

B. End point of circulation, moisture carryover, and combustion

C. Beginning of ignition, water limit, and pressure limit

D. End point of steam, fuel limit, and pressure limit

2. What is the minimum pressure required for a nitrogen blanket lay-up?

A. 2 psig

B. 5 psig

C. 10 psig

D. 15 psig

3. What is the first stage in the separation of steam and water in a CE boiler?

A. Primary separators

B. Secondary separators

C. Steam traps

D. Condensate pumps

4. When setting handhole plates for hydrostatic testing, to what degree should the handhole nut be tightened?

A. To a finger tight degree

B. 1/4 turn past finger tight

C. 1/2 turn past finger tight

D. Full turn past finger tight

5. Who typically maintains the Engineering log?

A. Chief Engineer

B. Engineering Officer of the Watch (EOOW)

C. Watch Supervisor

D. Dock Master

6. What serves as the heating source for the economizer?

A. Thermal oil

B. Electric heaters

C. Combustion gases

D. High-pressure steam

SAMPLE

7. Which form is used for requisitioning material that is not available through Supply?

A. NAVSUP form 1348-7

B. NAVSUP form 1348-5

C. NAVSUP form 1348-6

D. NAVSUP form 1348-9

8. What type of failure can result from improperly installed mortared joints in firebrick?

A. Cracking and spalling

B. Reduction in thermal efficiency

C. Increased weight on the structure

D. Poor aesthetic appearance

9. In the context of automatic boiler controls, what is the time interval by which rate action influences proportional position action?

A. Delay time

B. Rate time

C. Response time

D. Adjustment time

10. What does the 'Flank' speed designation generally indicate in a naval context?

A. Maximum speed

B. Standard cruising speed

C. Reduced speed

D. Emergency speed

SAMPLE

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. What are the three end points a steaming boiler has?

A. Pressure limit, water limit, safety limit

B. End point of circulation, moisture carryover, and combustion

C. Beginning of ignition, water limit, and pressure limit

D. End point of steam, fuel limit, and pressure limit

The correct answer identifies key performance measures of a steaming boiler. The three end points a steaming boiler has—end point of circulation, moisture carryover, and combustion—are crucial for evaluating the efficiency and safety of the boiler operation. The end point of circulation refers to the system's capability to maintain proper water flow within the boiler. This is critical because insufficient circulation can lead to localized overheating and damage due to hot spots. Understanding this aspect ensures that the water is adequately circulated to absorb heat, which is essential for effective steam generation. Moisture carryover pertains to the unwanted transport of water droplets along with the steam. High levels of moisture in steam can adversely affect steam quality, leading to a decrease in thermal efficiency and potential damage to downstream equipment. Recognizing this endpoint is vital for maintaining the purity and quality of steam used in processes. Combustion is the fundamental process by which energy is produced within a boiler by burning fuel. This endpoint emphasizes the need for effective fuel utilization to ensure that the boiler operates efficiently and meets the required steam output. These concepts collectively underscore critical operational parameters for safe and efficient boiler function.

2. What is the minimum pressure required for a nitrogen blanket lay-up?

A. 2 psig

B. 5 psig

C. 10 psig

D. 15 psig

The minimum pressure required for a nitrogen blanket lay-up is 5 psig. This pressure is crucial to ensure that the nitrogen blanket can effectively displace any potential moisture and oxygen in the system, preventing corrosion and other forms of damage during periods of inactivity. A blanket of nitrogen serves not only to maintain a non-reactive atmosphere within the system but also to provide a slight overpressure that keeps contaminants out. If the pressure were lower than 5 psig, it would not adequately create the necessary barrier to atmospheric conditions, thereby increasing the risk of corrosion and degradation of the equipment. Additionally, pressures that are too low could lead to nitrogen being unable to fully blanket the system, allowing air to enter and mix with whatever is being stored or protected. Therefore, maintaining a nitrogen pressure of at least 5 psig is a key factor in ensuring the integrity and longevity of the equipment during lay-up periods.

SAMPLE

3. What is the first stage in the separation of steam and water in a CE boiler?

A. Primary separators

B. Secondary separators

C. Steam traps

D. Condensate pumps

The first stage in the separation of steam and water in a CE (Carrier Equipment) boiler is the primary separators. These separators are specifically designed to separate moisture from the steam generated in the boiler. As steam production occurs, it often carries with it some water droplets, which can impact the efficiency and performance of steam systems if not properly removed. Primary separators utilize gravitational forces, allowing the heavier water droplets to settle out from the steam. Once the steam is separated, it can then be channeled for use in various applications, such as heating or power generation. The following stages may involve additional equipment, like secondary separators, which further refine the steam quality by removing any remaining moisture. However, the process begins with the primary separators, making them essential for effective steam generation and quality control in boiler operations.

4. When setting handhole plates for hydrostatic testing, to what degree should the handhole nut be tightened?

A. To a finger tight degree

B. 1/4 turn past finger tight

C. 1/2 turn past finger tight

D. Full turn past finger tight

When preparing for hydrostatic testing, the proper tightening of handhole plates is crucial to ensure a secure seal and prevent leaks. Tightening the handhole nut to a half turn past finger tight is the recommended procedure because this level of torque is typically sufficient to create a strong, leak-proof seal without over-tightening, which could risk damaging the gasket or the plate itself. This method strikes a balance between ensuring that the plate is securely fitted while also allowing for the possibility of slight adjustments if needed later. Ensuring the nuts are not over-tightened helps to avoid warping or distortion of the handhole cover during testing, which could lead to failure during the hydrostatic test. In contrast, tightening to lower levels, such as finger tight or a quarter turn past finger tight, might not provide adequate sealing pressure, increasing the risk of leaks. Likewise, a full turn past finger tight can introduce excessive pressure, potentially damaging components or the sealing gasket. Therefore, tightening to a half turn past finger tight is the most appropriate choice for ensuring both security and safety during hydrostatic testing.

SAMPLE

5. Who typically maintains the Engineering log?

A. Chief Engineer

B. Engineering Officer of the Watch (EOOW)

C. Watch Supervisor

D. Dock Master

The Engineering Officer of the Watch (EOOW) is responsible for maintaining the Engineering log. This log serves as a detailed record of the ship's engineering operations and is crucial for monitoring the status of machinery, systems, and any significant events that occur during the watch. The EOOW is specifically tasked with documenting various parameters such as temperature, pressure, fuel levels, and maintenance activities, ensuring that the information is accurate and current. This documentation is essential for ensuring operational safety and efficiency, as it provides a historical account of the engineering conditions on board that can be referred to in future analysis or investigations. While the Chief Engineer and other supervisory roles may be involved in oversight and decision-making, the direct responsibility for the log falls to the EOOW during their watch. Thus, the answer highlights the EOOW's crucial role in maintaining accurate and timely records aboard the vessel.

6. What serves as the heating source for the economizer?

A. Thermal oil

B. Electric heaters

C. Combustion gases

D. High-pressure steam

The economizer is a component in a steam generation system that recovers waste heat from the flue gas leaving the boiler. The primary function of the economizer is to preheat the feedwater entering the boiler, which improves the overall efficiency of the steam generation process. Combustion gases are the correct answer because they provide a significant source of heat as they exit the combustion chamber. The economizer uses these hot gases to transfer heat to the feedwater, thereby reducing the amount of fuel necessary to achieve the desired steam output. By harnessing the heat energy from combustion gases, the economizer enhances efficiency, conserves fuel, and leads to lower operational costs. In contrast, thermal oil, electric heaters, and high-pressure steam may serve other purposes in various systems or applications but do not specifically function as the heating source for an economizer in the context of steam generation.

SAMPLE

7. Which form is used for requisitioning material that is not available through Supply?

A. NAVSUP form 1348-7

B. NAVSUP form 1348-5

C. NAVSUP form 1348-6

D. NAVSUP form 1348-9

The correct answer is the NAVSUP form 1348-6, which is specifically designated for requisitioning material that is not available through Supply. This form serves as a procurement request used by personnel to acquire items that are not in stock or readily available through the normal supply channels. The use of the NAVSUP form 1348-6 allows for a streamlined process in acquiring critical materials, ensuring that the necessary items can be quickly ordered and delivered, ultimately minimizing operational downtime. By using the correct procurement form, the request can be processed efficiently, ensuring accountability and proper documentation of the requisition. The other forms mentioned serve different purposes: the NAVSUP form 1348-7 is generally used for material that is available through supply channels; the NAVSUP form 1348-5 is for requisitioning support items; and the NAVSUP form 1348-9 is related to specific logistics and inventory management processes. Each form's distinct purpose underscores the importance of using the appropriate document for specific scenarios in material requisitioning.

8. What type of failure can result from improperly installed mortared joints in firebrick?

A. Cracking and spalling

B. Reduction in thermal efficiency

C. Increased weight on the structure

D. Poor aesthetic appearance

Improperly installed mortared joints in firebrick can lead to cracking and spalling due to several factors related to the performance and integrity of the brickwork. Firebrick is specifically designed to withstand high temperatures, but when the joints are not installed correctly, it can create weak points within the structure. Cracking may occur as thermal expansion and contraction take place with temperature fluctuations. If the mortar does not have the correct flexibility or bonding ability, the stresses from thermal cycling can lead to cracks in the mortar and the firebricks. Spalling refers to the breaking away of surface material, which can also result from the same thermal stresses or due to moisture infiltration which can expand when it freezes. Both cracking and spalling compromise the firebrick's ability to function effectively in high-temperature applications, thereby impacting the overall durability and performance of the installation. While the other options touch on different aspects that could be of concern, they do not directly relate to the immediate structural and functional impacts caused by improperly installed mortar.

SAMPLE

9. In the context of automatic boiler controls, what is the time interval by which rate action influences proportional position action?

A. Delay time

B. Rate time

C. Response time

D. Adjustment time

In automatic boiler controls, the concept of rate action influencing proportional position action refers to how quickly the system responds to changes in demand. Rate time is specifically the time interval over which rate action affects the proportional control action. Proportional control adjusts the output based on the difference between the desired setpoint and the current state, while rate action acts on the rate of change of this error. This means that as the process variable changes rapidly, the rate action helps to adjust the proportional response to avoid overshooting or oscillations. This concept is crucial for maintaining stability in boiler operations, as it ensures that the control system can adapt quickly enough to variations without creating instability. By understanding and managing the rate time, operators can enhance the performance and reliability of the boiler control system.

10. What does the 'Flank' speed designation generally indicate in a naval context?

A. Maximum speed

B. Standard cruising speed

C. Reduced speed

D. Emergency speed

The term 'Flank' speed in a naval context refers to the maximum speed that a ship can achieve under normal conditions. This designation indicates that the vessel is operating at full throttle, utilizing all of its available power to attain the highest speed possible. This speed is typically employed in situations requiring rapid movement or response, such as in maneuvering during a tactical operation or evading threats. Understanding this classification helps in recognizing the operational capabilities and limitations of naval vessels, as well as in strategizing for naval missions where speed is a critical factor. While the other speed designations like 'Standard cruising speed' or 'Reduced speed' relate to more economical or routine operational speeds, they do not convey the urgency and maximum power that 'Flank' speed indicates. Additionally, 'Emergency speed' is often associated with short bursts meant for urgent situations, but it does not represent the sustained maximum speed that 'Flank' encompasses.

SAMPLE

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://mmadvancement.examzify.com

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

SAMPLE