

EICA Mobile Crane & Digger Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

This is a sample study guide. To access the full version with hundreds of 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. Don't worry about getting everything right, 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, and take breaks to retain information better.

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.

7. Use Other Tools

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!

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Questions

- 1. How much clearance is typically required from any part of the crane and its load when working around power lines of more than 750kV?**
 - A. 30 ft**
 - B. 45 ft**
 - C. 60 ft**
 - D. 75 ft**
- 2. What is a key responsibility of ground personnel when cranes operate near power lines?**
 - A. To manage the load weight**
 - B. To monitor distance from power lines**
 - C. To ensure operator safety**
 - D. To operate the crane**
- 3. If a crane has a line pull of 8,000 lbs and needs to lift a net load of 36,400 lbs, how many parts of line are required?**
 - A. 4**
 - B. 5**
 - C. 6**
 - D. 7**
- 4. What is the minimum number of parts of line required to lift a load weighing 36,500 lbs with a crane that has a line pull of 9,000 lbs?**
 - A. 3**
 - B. 4**
 - C. 5**
 - D. 6**
- 5. What is essential for managing safety around crane operations?**
 - A. Regular maintenance of the crane**
 - B. Creating a safety barrier**
 - C. Training workers on hazards**
 - D. All of the above**

- 6. What is the time frame for a periodic inspection of a crane?**
- A. Weekly to monthly**
 - B. Monthly to annually**
 - C. Daily to weekly**
 - D. Annually to biennially**
- 7. During pole setting near energized power lines, what are protective covers rated for line potential?**
- A. Optional**
 - B. Required**
 - C. Recommended**
 - D. Discouraged**
- 8. When swinging a heavy load on outriggers, what must the outrigger being swung over support?**
- A. 50% of the load**
 - B. 100% of the load**
 - C. 85% of the weight of the crane and 100% of the weight of the load**
 - D. 75% of the weight of the load**
- 9. What information must be displayed on a spreader bar that weighs over 100 lbs?**
- A. Manufacturer details**
 - B. Weight**
 - C. Load capacity**
 - D. Inspection date**
- 10. What design factor is applied to rigging used for suspended personnel platform lifting?**
- A. 3**
 - B. 4**
 - C. 5**
 - D. 6**

Answers

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

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Explanations

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1. How much clearance is typically required from any part of the crane and its load when working around power lines of more than 750kV?

A. 30 ft

B. 45 ft

C. 60 ft

D. 75 ft

The requirement for clearance from power lines, especially those carrying more than 750kV, is crucial for ensuring safety during crane operations. A clearance of 45 feet is mandated in these situations to prevent electrical hazards such as arcing, which can occur when there is insufficient distance between the crane, its load, and the high-voltage lines. This distance is established based on safety regulations and guidelines, which prioritize the protection of both the personnel operating the crane and the integrity of the electrical infrastructure. Clarity on the required buffer is paramount as it takes into account various factors such as the voltage level, environmental conditions, and the movement dynamics of the crane and its load. Adhering to this clearance not only helps avoid potential accidents but also ensures compliance with safety regulations designed for high-voltage work environments.

2. What is a key responsibility of ground personnel when cranes operate near power lines?

A. To manage the load weight

B. To monitor distance from power lines

C. To ensure operator safety

D. To operate the crane

Monitoring the distance from power lines is a critical responsibility of ground personnel when cranes operate in their vicinity. This task is essential because power lines can pose significant hazards, such as electrical shock or electrocution, if the crane or its load comes too close to the lines. Ground personnel are tasked with ensuring that a safe clearance distance is maintained to prevent accidents and injuries. Effective monitoring involves being aware of the crane's position and verifying that no part of the crane, including the boom and any loads being lifted, approaches the power lines. This requires constant vigilance and communication between ground personnel and the crane operator to facilitate safe operations, especially in environments with overhead hazards. Ensuring a safe distance reduces the risk of electrical incidents and enhances overall safety on the job site.

3. If a crane has a line pull of 8,000 lbs and needs to lift a net load of 36,400 lbs, how many parts of line are required?

- A. 4
- B. 5**
- C. 6
- D. 7

To determine the number of parts of line required for the crane to lift a net load of 36,400 lbs with a line pull capacity of 8,000 lbs, you can use the following principle: the total load being lifted must be divided by the line pull capacity to ascertain how many parts of line are necessary to safely and effectively lift the load. In this case, you take the total load (36,400 lbs) and divide it by the line pull capacity (8,000 lbs): $36,400 \text{ lbs} \div 8,000 \text{ lbs} = 4.55$. Since you cannot have a fraction of a part of line, and you must round up to the next whole number in order to ensure you can safely lift the load, you will need 5 parts of line. This ensures that the load will be effectively balanced and within the lifting capacity of the crane, maintaining safety standards while performing the lift. Therefore, understanding the calculation reveals that option B, indicating 5 parts of line, is indeed the correct answer as it guarantees the crane can lift the specified load without exceeding its line pull capacity.

4. What is the minimum number of parts of line required to lift a load weighing 36,500 lbs with a crane that has a line pull of 9,000 lbs?

- A. 3
- B. 4
- C. 5**
- D. 6

To determine the minimum number of parts of line required to lift a load safely, it is essential to consider both the weight of the load and the crane's line pull capacity. The load you need to lift weighs 36,500 lbs, while the crane has a maximum line pull capacity of 9,000 lbs. To find out how many parts of line are necessary for safe lifting, you can divide the weight of the load by the crane's line pull capacity. This calculation provides the minimum number of lines needed to lift the load without exceeding the crane's limit: $36,500 \text{ lbs (load)} \div 9,000 \text{ lbs (line pull)} = 4.055$. Since you cannot have a fraction of a line, you round up to the nearest whole number, which is 5. This means that five parts of line are necessary to ensure the load can be lifted safely and effectively without overloading the crane beyond its capacity. Thus, the choice indicating five parts of line reflects the need to account for safety and operational limits in crane lifting applications. In this scenario, selecting five parts of line adequately distributes the weight of the load across the crane's capabilities, ensuring a safe working environment.

5. What is essential for managing safety around crane operations?

- A. Regular maintenance of the crane**
- B. Creating a safety barrier**
- C. Training workers on hazards**
- D. All of the above**

Managing safety around crane operations requires a comprehensive approach, which includes all listed aspects. Regular maintenance of the crane ensures that the equipment is functioning properly and reduces the risk of mechanical failure during operations. This involves routine inspections, repairs, and adherence to maintenance schedules as outlined by the manufacturer. Creating a safety barrier is crucial for protecting workers and bystanders from potential hazards associated with crane operations. These barriers help to control the work environment and keep unauthorized individuals at a safe distance from the operational area. Training workers on hazards is vital for ensuring that all personnel involved understand the risks associated with crane operation, including how to respond in emergencies. Proper training equips workers with the knowledge and skills necessary to operate safely and recognize unsafe situations. By combining maintenance, safety barriers, and training, you create a robust safety management system that minimizes risks and protects everyone involved in crane operations. This holistic approach is essential for maintaining a safe working environment.

6. What is the time frame for a periodic inspection of a crane?

- A. Weekly to monthly**
- B. Monthly to annually**
- C. Daily to weekly**
- D. Annually to biennially**

The correct answer relates to the regulatory guidelines and best practices regarding the maintenance and safety checks of cranes. Periodic inspections are essential for ensuring the safety and reliability of cranes in operation. The typical time frame for these inspections, which are usually recommended to be more thorough than daily checks, spans from monthly to annually. This schedule allows for sufficient time between each inspection to monitor the crane's condition while ensuring that any developing issues can be identified and addressed before they pose a risk. Since cranes are heavy machinery that can be subject to wear and tear, regular inspections are critical to maintaining compliance with safety standards and preventing accidents. This frequency strikes a balance between ensuring safety and operational efficiency, allowing enough time for thorough evaluations while minimizing downtime. Other options suggest either shorter or longer periods that do not align with the accepted standards for periodic inspections in the industry.

7. During pole setting near energized power lines, what are protective covers rated for line potential?

A. Optional

B. Required

C. Recommended

D. Discouraged

Protective covers that are rated for line potential are required during pole setting near energized power lines to ensure the safety of workers and the public. These covers are designed to prevent accidental contact with live electrical lines, which can pose serious risks including electric shock or electrocution. The requirement for protective covers reflects the need to adhere to safety standards and regulations that mandate protective measures when working in proximity to energized equipment. By using protective covers, workers are not only shielding themselves but also helping to mitigate the risk of an electrical incident, making the working environment safer. This requirement is crucial for any practices or procedures involving tasks close to energized conductors, emphasizing the importance of safety precautions in high-risk scenarios. The other options, such as optional, recommended, and discouraged, do not capture the essential nature of this safety measure. The requirement clearly indicates that such protective equipment is not just a good practice, but a necessary one when dealing with potential electrical hazards.

8. When swinging a heavy load on outriggers, what must the outrigger being swung over support?

A. 50% of the load

B. 100% of the load

C. 85% of the weight of the crane and 100% of the weight of the load

D. 75% of the weight of the load

When swinging a heavy load on outriggers, the outrigger being swung over is required to support 85% of the weight of the crane, in addition to 100% of the weight of the load being lifted. This requirement is crucial for maintaining stability and preventing tipping during operations. The reason for this specification is rooted in the dynamics of lifting and the gravitational forces involved. As the load is swung, the crane experiences additional forces that can shift its center of gravity. The majority of the crane's weight must be supported by the outriggers to ensure that the crane remains stable and secure while the load is in motion. This balance helps to distribute the forces effectively across the outriggers and minimizes the risk of overload on any one outrigger, which could lead to a collapse or instability during operation. Consequently, understanding and adhering to this requirement supports safe operational practices when using mobile cranes in various lifting scenarios.

9. What information must be displayed on a spreader bar that weighs over 100 lbs?

- A. Manufacturer details**
- B. Weight**
- C. Load capacity**
- D. Inspection date**

When a spreader bar weighs over 100 lbs, it is crucial to display the weight of the spreader bar. This information is essential for operators and riggers to ensure safe lifting practices. Knowing the weight of the spreader bar allows them to accurately calculate the total load being lifted, including the weight of the spreader itself, which is a critical factor in preventing overloading of the crane and ensuring that the lift remains within safe operating limits. Additionally, displaying the weight helps in maintaining clarity and transparency about the equipment being used, ensuring that all personnel involved in the lifting operation are aware of the additional weight being introduced to the rigging system. This informs decisions regarding the capabilities of the crane and helps avoid any hazardous situations. While details such as manufacturer information, load capacity, and inspection dates are important for ensuring the safety and functionality of lifting equipment, the specific requirement for a spreader bar over 100 lbs is to prominently display its weight for informed rigging and lifting decisions.

10. What design factor is applied to rigging used for suspended personnel platform lifting?

- A. 3**
- B. 4**
- C. 5**
- D. 6**

The design factor applied to rigging used for suspended personnel platform lifting is 5. This higher design factor is implemented to ensure an added margin of safety given the inherent risks involved in lifting personnel. By using a design factor of 5, the rigging equipment is required to support five times the load it is expected to carry during normal operation. This factor accounts for various uncertainties, including dynamic loads, potential wear and tear on equipment, and unforeseen operational challenges that may arise during lifting operations. In contexts where personnel are lifted, safety becomes paramount. The decision to implement a higher design factor reflects the commitment to the safety of workers, ensuring that even in the face of unexpected conditions, the rigging will perform reliably to prevent accidents. Understanding the importance of this design factor helps in ensuring compliance with safety regulations and standards in the industry, significantly reducing the likelihood of incidents during operations involving suspended personnel platforms.

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://eicamobilecraneanddigger.examzify.com>

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