

New York City DOB Master Electrician Practice Exam (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. What must low-voltage equipment in anesthetizing areas be approved as?**
 - A. Standard equipment**
 - B. Intrinsically safe equipment**
 - C. High-efficiency equipment**
 - D. Multi-purpose equipment**
- 2. For fixtures located close to a ballast, what is the minimum temperature rating required for conductors?**
 - A. 60C degree**
 - B. 75C degree**
 - C. 90C degree**
 - D. 105C degree**
- 3. What is the maximum internal current permitted through a line isolated monitor when grounded?**
 - A. 0.5 milliamperes**
 - B. 1 milliamperes**
 - C. 1.5 milliamperes**
 - D. 2 milliamperes**
- 4. What is the voltage requirement for the electric vehicle supply equipment to function properly indoors?**
 - A. 120V**
 - B. 220V**
 - C. 240V**
 - D. 480V**
- 5. How much profit does an electrician make when he sells 100 units of armored cable connectors bought for \$2.10 each at a selling price of \$3.00 each, with 30% overhead?**
 - A. \$20.00**
 - B. \$25.00**
 - C. \$27.00**
 - D. \$30.00**

- 6. What is the height requirement for the coupling means of electric vehicle supply equipment?**
- A. Not less than 12 inches and not more than 3 feet**
 - B. Not less than 18 inches and not more than 4 feet**
 - C. Not less than 24 inches and not more than 6 feet**
 - D. Not less than 30 inches and not more than 5 feet**
- 7. What is the minimum size of overhead service drop conductors in copper?**
- A. #6 AWG**
 - B. #8 AWG**
 - C. #10 AWG**
 - D. #12 AWG**
- 8. What is the average weight of a manhole cover designed to deter unqualified persons from accessing the opening?**
- A. 50 lbs**
 - B. 75 lbs**
 - C. 100 lbs**
 - D. Over 100 lbs**
- 9. What is the kVA requirement for a dishwasher in a multi-family building?**
- A. 1.50 kVA**
 - B. 2.00 kVA**
 - C. 3.00 kVA**
 - D. 4.50 kVA**
- 10. What is the minimum clearance height required for overhead feeder conductors over commercial areas with truck traffic?**
- A. 12 feet**
 - B. 15 feet**
 - C. 18 feet**
 - D. 20 feet**

Answers

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

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Explanations

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1. What must low-voltage equipment in anesthetizing areas be approved as?

- A. Standard equipment**
- B. Intrinsically safe equipment**
- C. High-efficiency equipment**
- D. Multi-purpose equipment**

Low-voltage equipment used in anesthetizing areas must be approved as intrinsically safe equipment. This designation is crucial because anesthetizing locations require an exceptionally high level of safety due to the presence of flammable anesthetic agents and the potential for electrical sparks or faults, which could lead to explosions or fires. Intrinsically safe equipment is designed to prevent any electrical energy from being available to spark, thus ensuring safety in environments where explosive atmospheres may be present. The concept of intrinsic safety relies on the equipment's ability to operate without creating a risk of ignition, making it vital for use in sensitive medical areas where patient safety is paramount. Regulatory bodies typically enforce these standards, and compliance ensures that equipment can be safely used in environments where levels of risk are heightened due to the use of volatile substances. While other types of equipment might have beneficial features in different contexts, they do not offer the critical safety assurances required in anesthetizing environments, where the risk of fire or explosion must be minimized. Therefore, the insistence on intrinsically safe equipment is essential in maintaining both patient and staff safety during surgical procedures.

2. For fixtures located close to a ballast, what is the minimum temperature rating required for conductors?

- A. 60C degree**
- B. 75C degree**
- C. 90C degree**
- D. 105C degree**

The minimum temperature rating required for conductors located close to a ballast is 90°C. This requirement is stipulated because ballasts, especially in fluorescent lighting systems, can generate significant heat during operation. Conductors that are rated at 90°C are more suited to withstand the elevated temperatures without degrading over time, ensuring that they maintain their integrity and function effectively in the long term. Using conductors with a lower temperature rating, such as those rated at 60°C or 75°C, may not provide sufficient safety margins. These lower-rated conductors could experience insulation breakdown or other failure mechanisms when subjected to the higher thermal environment created by the ballast, potentially leading to safety hazards like short circuits or electrical fires. Consequently, for installations where heat is a factor, using conductors rated at 90°C helps ensure compliance with safety standards and the reliable operation of electrical systems.

3. What is the maximum internal current permitted through a line isolated monitor when grounded?

- A. 0.5 milliamperes**
- B. 1 milliamperes**
- C. 1.5 milliamperes**
- D. 2 milliamperes**

The maximum internal current permitted through a line isolated monitor when grounded is 1 milliamperes. This specification is crucial for ensuring safety and compliance with electrical codes and standards. Grounding helps prevent electric shock and ensures that any fault currents are properly managed. In the context of line isolation, monitors are designed to detect insulation faults. If the internal current exceeds the specified threshold, such as in cases where 1 milliamperes is surpassed, it could indicate potential hazards or malfunctions within the electrical system. This standard is in line with safety practices that aim to minimize the risk of shock or equipment damage. Monitoring the current through isolators is also important for maintaining system integrity and reliability. Keeping the current at or below this level is essential for the protection of both personnel and equipment in a variety of settings, particularly in healthcare and industrial applications where equipment must adhere to strict safety regulations.

4. What is the voltage requirement for the electric vehicle supply equipment to function properly indoors?

- A. 120V**
- B. 220V**
- C. 240V**
- D. 480V**

The voltage requirement for electric vehicle supply equipment (EVSE) to function properly indoors is 240V. This is the standard voltage level that meets the needs of most electric vehicle charging systems designed for residential and commercial applications. Using 240V allows for efficient charging of electric vehicles, enabling faster charging times compared to lower voltages such as 120V. This voltage is capable of supporting the power levels necessary for charging electric vehicles effectively, thus ensuring optimal performance and safety. While other voltage levels such as 120V may be available for basic charging needs, they typically result in considerably longer charging times and are not suitable for the faster charging requirements of most electric vehicles. Higher voltages like 480V are generally reserved for industrial applications and are not necessary or practical for residential indoor charging setups. Therefore, 240V is the appropriate choice for providing the necessary power to EVSE indoors.

5. How much profit does an electrician make when he sells 100 units of armored cable connectors bought for \$2.10 each at a selling price of \$3.00 each, with 30% overhead?
- A. \$20.00
 - B. \$25.00
 - C. \$27.00**
 - D. \$30.00

To find the profit made by the electrician when selling the armored cable connectors, we first need to calculate the total cost of purchasing the connectors and then determine the total revenue generated from selling them. The purchase price per connector is \$2.10, and if the electrician buys 100 units, the total cost is calculated as follows: Total cost = Purchase price x Number of units Total cost = $\$2.10 \times 100 = \210.00 . Next, the selling price per connector is \$3.00. Therefore, the total revenue from selling 100 units is: Total revenue = Selling price x Number of units Total revenue = $\$3.00 \times 100 = \300.00 . Now, the gross profit before considering overhead expenses can be calculated: Gross profit = Total revenue - Total cost Gross profit = $\$300.00 - \$210.00 = \$90.00$. However, the electrician incurs an overhead of 30%, which needs to be deducted from the gross profit. The calculation of overhead is based on the total cost: Overhead = 30% of Total Cost Overhead = $0.30 \times \$210.00 = \63.00 . After determining the overhead cost, the

6. What is the height requirement for the coupling means of electric vehicle supply equipment?
- A. Not less than 12 inches and not more than 3 feet
 - B. Not less than 18 inches and not more than 4 feet**
 - C. Not less than 24 inches and not more than 6 feet
 - D. Not less than 30 inches and not more than 5 feet

The height requirement for the coupling means of electric vehicle supply equipment is set to ensure accessibility and safety for users. The specification of being not less than 18 inches and not more than 4 feet helps accommodate a variety of users, including those with physical disabilities, while also adhering to safety standards. This range is designed to make the charging connection easy to reach from a standing position or when bending slightly, catering to the needs of most vehicles. By having this specific height, it allows for standardized installations that comply with relevant electrical codes and regulations, promoting uniformity across installations. Additionally, it minimizes the risk of tripping hazards or damage to equipment that could occur if the coupling means were mounted too low or too high. Ensuring proper height also enhances functionality, making the equipment user-friendly without compromising the technical and safety aspects essential for electric vehicle charging stations. Thus, this answer aligns with both user accessibility and safe operational practices in electric vehicle infrastructure.

7. What is the minimum size of overhead service drop conductors in copper?

- A. #6 AWG
- B. #8 AWG**
- C. #10 AWG
- D. #12 AWG

The minimum size of overhead service drop conductors in copper is #6 AWG. This requirement is outlined in the National Electrical Code (NEC) and further supported by local amendments in New York City. The reasoning behind the use of #6 AWG or larger is to ensure that the conductors can safely carry the service load while minimizing voltage drop and providing adequate mechanical strength to withstand the environmental stresses associated with overhead installations, such as wind and ice loading. In overhead applications, conductors must be robust enough to handle not just the electrical load but also the risks of physical damage or degradation from weather exposure. Conductors that are too small may lead to overheating, increased vulnerability, and potential fire hazards. While the question posed seems to indicate #8 AWG as the answer, it is essential to adhere to the code specifications which mandate the use of #6 AWG minimum for copper conductors in overhead service drops to ensure safety and reliability in electrical installations.

8. What is the average weight of a manhole cover designed to deter unqualified persons from accessing the opening?

- A. 50 lbs
- B. 75 lbs
- C. 100 lbs
- D. Over 100 lbs**

Manhole covers designed to deter unqualified persons typically have an average weight of over 100 lbs. The primary purpose of these heavy covers is to prevent unauthorized access while still allowing for necessary maintenance and inspections by qualified personnel. A heavier manhole cover is less likely to be moved or removed by individuals who do not possess the appropriate knowledge or authority, thus enhancing public safety. Manhole covers that exceed 100 lbs provide significant durability and security against tampering or accidental removal, which is crucial in urban environments where such openings exist on roadways or pedestrian areas. Engineering standards and practices often dictate the weight of these covers based on safety requirements and the specific application, ensuring that they can withstand traffic loads and adverse weather conditions while remaining secure. For this reason, the correct answer highlights the importance of substantial weight in manhole cover design for safety and security measures.

9. What is the kVA requirement for a dishwasher in a multi-family building?

- A. 1.50 kVA**
- B. 2.00 kVA**
- C. 3.00 kVA**
- D. 4.50 kVA**

In determining the kVA requirement for a dishwasher in a multi-family building, several factors, including the power ratings and manufacturer specifications, play a crucial role. Dishwashers typically require a specific amount of electrical power to operate efficiently. The standard requirement for residential dishwashers is often recognized in the industry to range around 1.5 kVA. This figure is determined based on the average demand of these appliances, taking into account their operational cycles and power consumption during peak usage. Understanding this value is essential not just for planning electrical loads but also for ensuring compliance with the code requirements related to residential and multi-family dwelling structures. By selecting 1.50 kVA as the requirement, one accounts for the specific energy use characteristics associated with typical dishwashers, aligning with best practices in electrical planning and safety standards for multi-family buildings.

10. What is the minimum clearance height required for overhead feeder conductors over commercial areas with truck traffic?

- A. 12 feet**
- B. 15 feet**
- C. 18 feet**
- D. 20 feet**

The minimum clearance height required for overhead feeder conductors over commercial areas where truck traffic is prevalent is indeed 18 feet. This requirement is established to ensure that there is adequate space above the ground to prevent any potential contact between vehicles, particularly large trucks, and the overhead electrical conductors. The 18-foot clearance helps to avoid scenarios that could lead to electrical hazards or power outages, ensuring both safety and reliability in areas designated for commercial traffic. The significance of this height lies in accommodating not only standard vehicles but also larger trucks that may require more vertical clearance. By adhering to this regulation, safety standards set by the National Electrical Code (NEC) or local code amendments can be upheld, protecting workers, pedestrians, and drivers in commercial environments.

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://nycdobmasterelectrician.examzify.com>

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