

# NBE Science 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**

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- 1. What structure does the right anterior superior iliac spine serve as the trocar guide for?**
  - A. Appendix**
  - B. Cecum**
  - C. Colon**
  - D. Small intestine**
  
- 2. Restored eyelashes should have no hair extending from which area?**
  - A. Tip of eyelid**
  - B. Corners of the eye**
  - C. Extreme ends of the line of closure**
  - D. Upper brow line**
  
- 3. Which organ does the superior mesenteric artery primarily supply?**
  - A. Large intestine**
  - B. Small intestine**
  - C. Stomach**
  - D. Liver**
  
- 4. Which anatomical structure is affected by hemorrhoids?**
  - A. Arteries**
  - B. Veins**
  - C. Nerves**
  - D. Muscles**
  
- 5. What is a common sign of tissue decomposition?**
  - A. Increased body temperature**
  - B. Odeur**
  - C. Dehydration**
  - D. Improved coloration**

**6. Which of the following methods consists of injecting a few ounces of arterial chemical, then draining for a few minutes, each one separately?**

- A. Continuous drainage**
- B. Alternative method**
- C. Concurrent injection**
- D. Intermittent injection**

**7. Histoplasma is reported to occur in high numbers in the Ohio and Mississippi river valleys. This represents which of the following?**

- A. An endemic**
- B. An epidemic**
- C. A pandemic**
- D. A sporadic occurrence**

**8. What disease is commonly caused by a coccus bacterium?**

- A. Strep throat**
- B. Syphilis**
- C. Tuberculosis**
- D. Influenza**

**9. What role does sodium citrate serve in embalming fluid?**

- A. Preservative**
- B. Anticoagulant**
- C. Disinfectant**
- D. Coloring agent**

**10. After extensive reduction by heat, what should you apply to restore dehydration in the eye area?**

- A. Moisturizing lotion**
- B. Water**
- C. Cavity fluid**
- D. Alcohol**

## **Answers**

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

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## **Explanations**

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**1. What structure does the right anterior superior iliac spine serve as the trocar guide for?**

- A. Appendix**
- B. Cecum**
- C. Colon**
- D. Small intestine**

The right anterior superior iliac spine is an important anatomical landmark that serves as a guide during surgical procedures, specifically for accessing the cecum. When performing procedures such as an appendectomy or in cases of conditions like appendicitis, targeting the cecum is crucial because it is located in the right lower quadrant of the abdomen, directly associated with the appendix. Using the right anterior superior iliac spine as a reference point helps ensure accurate placement of the trocar and minimizes the risks of injury to surrounding structures. The cecum, being the first part of the large intestine, lays in the area where the trocar must be expertly positioned to facilitate the procedure. This anatomical consideration is vital for significant surgical interventions, emphasizing the relevance of landmarks in guiding surgical access.

**2. Restored eyelashes should have no hair extending from which area?**

- A. Tip of eyelid**
- B. Corners of the eye**
- C. Extreme ends of the line of closure**
- D. Upper brow line**

Restored eyelashes should have no hair extending from the extreme ends of the line of closure to maintain a natural appearance and proper functionality. The line of closure refers to the area where the upper and lower eyelids meet when closed. Any hair extending beyond this area can create an unnatural look and may interfere with the normal opening and closing of the eyelids. This consideration is crucial when restoring eyelashes, as it impacts both aesthetics and eye health. Ensuring that the eyelashes remain within the natural bounds of the eyelid enhances the overall appearance and ensures that vision and eye movement are not compromised.

**3. Which organ does the superior mesenteric artery primarily supply?**

- A. Large intestine**
- B. Small intestine**
- C. Stomach**
- D. Liver**

The superior mesenteric artery primarily supplies blood to the small intestine. It is a major artery that branches off from the abdominal aorta and delivers oxygenated blood to the majority of the small intestine, including the duodenum, jejunum, and ileum. This artery also provides branches that supply parts of the large intestine, but its primary role is in supplying the small intestine. Understanding the vascular supply of the digestive organs is crucial for comprehending how nutrients are delivered and absorbed, as well as how various digestive disorders may affect blood flow. The structure and function of the superior mesenteric artery illustrate its importance in the overall gastrointestinal system.

**4. Which anatomical structure is affected by hemorrhoids?**

- A. Arteries**
- B. Veins**
- C. Nerves**
- D. Muscles**

Hemorrhoids specifically affect the veins in the rectal area. They are swollen and inflamed blood vessels that can occur either internally or externally around the anus. The condition arises when there is increased pressure in the lower rectum, often due to factors such as straining during bowel movements, extended periods of sitting, or conditions that cause chronic constipation or diarrhea. The swelling occurs when the blood vessels become engorged with blood and lose their elasticity. This is distinctly related to the venous system, as it is the veins that are involved in the accumulation and pressure of blood leading to the symptoms associated with hemorrhoids, such as discomfort, pain, and bleeding. Understanding that hemorrhoids are a vascular issue helps to clarify their nature and the reasons behind their uncomfortable symptoms, which are not directly linked to arteries, nerves, or muscles.

## 5. What is a common sign of tissue decomposition?

- A. Increased body temperature
- B. Odeur**
- C. Dehydration
- D. Improved coloration

The common sign of tissue decomposition is the presence of odour, which occurs due to the breakdown of tissues by bacteria and enzymes after death. As decomposition progresses, the metabolic processes of bacteria create various gases and other byproducts, leading to distinct and often unpleasant smells. This olfactory evidence is a key indicator of tissue decay and is typically among the first noticeable signs when a body begins to decompose. Increased body temperature is not directly associated with decomposition; instead, it may occur immediately after death due to metabolic processes. Dehydration may be observed in tissues over time, but it is not a defining characteristic that signals decomposition itself. Improved coloration contradicts the nature of decomposition, as tissues generally lose their healthy appearance and may become discolored or mottled. Thus, the presence of an odour is the most definitive and recognizable sign of tissue decomposition.

## 6. Which of the following methods consists of injecting a few ounces of arterial chemical, then draining for a few minutes, each one separately?

- A. Continuous drainage
- B. Alternative method**
- C. Concurrent injection
- D. Intermittent injection

The method described in the question involves a technique where a certain amount of arterial chemical is injected into the body, followed by a separate phase of drainage for a few minutes. This approach allows for the chemical to be distributed effectively throughout the vascular system before fluid is removed, and it is typically employed to ensure that the tissues receive the desired embalming solution while allowing for the removal of blood and other fluids. This method is known as the alternative method of injection and drainage. It is distinctive because it varies from traditional concurrent or continuous methods by separating the injection and drainage phases, allowing for a precise control over fluid distribution and elimination. This technique can be particularly useful in complex cases or when specific anatomical areas require particular attention. In contrast, continuous drainage involves simultaneous injection and drainage. Concurrent injection refers to the simultaneous process of injecting fluid while also draining, with no pause. Intermittent injection typically involves a pattern where fluid is injected in a stop-and-start manner, but again does not separate injection and drainage in the distinct phases described in the question. Thus, the alternative method is the correct choice as it accurately describes the process of first injecting the chemical and then conducting a separate drainage period.

**7. Histoplasma is reported to occur in high numbers in the Ohio and Mississippi river valleys. This represents which of the following?**

- A. An endemic**
- B. An epidemic**
- C. A pandemic**
- D. A sporadic occurrence**

Histoplasma is known to be a fungal pathogen that thrives in specific geographical areas, particularly in the Ohio and Mississippi river valleys, where conditions support its prevalence. When discussing the classification of disease occurrence, the term that best describes Histoplasma's high incident cases in these specific regions is endemic.

Endemic refers to a disease or condition regularly found and consistently present in a particular geographic area or population. In this case, the high number of Histoplasma cases in the Ohio and Mississippi river valleys suggests that the fungus is a regular part of the ecology in those locales, supported by environmental factors and the prevalence of bat and bird droppings, which act as a reservoir for the spores of the fungus. On the other hand, an epidemic refers to a sudden increase in disease cases within a specific area above what is normally expected, while a pandemic indicates a disease that has spread over multiple countries or continents, affecting a large number of people.

Sporadic occurrences relate to diseases that are infrequently occurring in a given area. In conclusion, given that Histoplasma is consistently found in high numbers in those valleys, the term endemic appropriately captures the relationship between the disease and its geographical distribution.

**8. What disease is commonly caused by a coccus bacterium?**

- A. Strep throat**
- B. Syphilis**
- C. Tuberculosis**
- D. Influenza**

The disease commonly caused by a coccus bacterium is strep throat, which is primarily caused by *Streptococcus pyogenes*. This bacterium falls under the category of cocci, which are spherical-shaped bacteria. Strep throat is an infection of the throat that leads to symptoms like a sore throat, fever, and swollen lymph nodes, among others. The other diseases listed are caused by different types of pathogens. Syphilis is caused by the bacterium *Treponema pallidum*, which is a spirochete, not a coccus. Tuberculosis is caused by *Mycobacterium tuberculosis*, which is a rod-shaped bacterium (bacillus), and influenza is caused by a virus, not a bacterium at all. Understanding the specific types of bacteria that cause various diseases is important for diagnosis and treatment in medical practice.

**9. What role does sodium citrate serve in embalming fluid?**

- A. Preservative**
- B. Anticoagulant**
- C. Disinfectant**
- D. Coloring agent**

Sodium citrate serves primarily as an anticoagulant in embalming fluid. Its main function is to prevent blood clotting, which is particularly important during the embalming process. If blood were to coagulate, it would complicate the fluid distribution and hinder the embalming procedure, making it less effective in preserving the body. By integrating sodium citrate into embalmers' solutions, rather than allowing blood to clot, it facilitates easier drainage and the effective introduction of embalming chemicals throughout the vascular system. This is crucial for achieving even distribution of the preservative and disinfectant properties of the embalming fluid, leading to better overall preservation of the tissues.

**10. After extensive reduction by heat, what should you apply to restore dehydration in the eye area?**

- A. Moisturizing lotion**
- B. Water**
- C. Cavity fluid**
- D. Alcohol**

To restore hydration in the eye area after extensive heat reduction, the most suitable choice is cavity fluid. Cavity fluid typically contains agents designed to retain moisture and can aid in hydrating tissues, which is especially important in sensitive areas like the eyes that may suffer from dehydration due to heat exposure. Moisturizing lotion, while beneficial in various contexts, may not be specifically formulated for the unique needs of the eye area, often leading to inadequate results. Applying water might not penetrate the skin effectively or provide lasting hydration. Alcohol is dehydrating, which would exacerbate the dryness in the eye area rather than restore it. Thus, cavity fluid stands out as the most appropriate option to effectively address the issue of dehydration.

# 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](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://nbescience.examzify.com>**

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

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