

NBSTSA Surgical Technology (ST) Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

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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

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- 1. Which paired sinuses are the largest sinuses located below the ocular orbits?**
 - A. Sphenoid**
 - B. Frontal**
 - C. Maxillary**
 - D. Ethmoid**

- 2. Which cranial nerve is responsible for innervating the larynx and pharynx?**
 - A. Glossopharyngeal**
 - B. Hypoglossal**
 - C. Vagus**
 - D. Accessory**

- 3. Which of these microbes is least likely to be associated with wound infections?**
 - A. Escherichia coli**
 - B. Staphylococcus**
 - C. Clostridium perfringens**
 - D. Treponema pallidum**

- 4. Fe^{2+} is formed when iron undergoes which of the following processes?**
 - A. Loses 2 protons.**
 - B. Gains 2 protons.**
 - C. Loses 2 electrons.**
 - D. Gains 2 electrons.**

- 5. What is true about capillary filtration pressure at the arterial end of the capillary?**
 - A. Blood flows toward the venous end.**
 - B. Most water is filtered into the interstitium.**
 - C. Oncotic pressure is greater than capillary pressure.**
 - D. There is no net movement of fluid.**

- 6. What is the main role of the mesentery in the human body?**
- A. Transport blood**
 - B. Support abdominal organs**
 - C. Secrete digestive enzymes**
 - D. Absorb nutrients**
- 7. From where do most intracranial aneurysms arise?**
- A. Ventricular system**
 - B. Cavernous sinus**
 - C. Internal carotid**
 - D. Circle of Willis**
- 8. Which system is responsible for preventing the growth of virulent pathogens?**
- A. Adaptive immune system.**
 - B. Antibiotics.**
 - C. Resident flora.**
 - D. Circulatory system.**
- 9. Amebic dysentery and giardiasis are caused by which type of pathogen?**
- A. Mycotic infections**
 - B. Worm infestations**
 - C. Caused by salmonella**
 - D. Caused by protozoan parasites**
- 10. Which of the following medications can relieve pain without causing a loss of consciousness?**
- A. Antibiotics**
 - B. Analgesics**
 - C. Sedatives**
 - D. Antidepressants**

Answers

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

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Explanations

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1. Which paired sinuses are the largest sinuses located below the ocular orbits?

- A. Sphenoid**
- B. Frontal**
- C. Maxillary**
- D. Ethmoid**

The maxillary sinuses are indeed the largest of the paranasal sinuses, and they are situated below the ocular orbits, which makes them distinct in relation to their anatomical location. Their size and position play a significant role in various medical and surgical considerations, particularly in fields involving the face and upper respiratory tract. The maxillary sinuses are important for their contributions to resonance of the voice, humidification and filtration of inhaled air, and the lightening of the skull's weight. Their anatomical proximity to the roots of the upper molars can also make them relevant in dental procedures and considerations. In contrast, the other options represent sinuses that are either smaller or located in different anatomical areas. For example, the sphenoid sinuses are located deeper within the skull behind the nasal cavity, while the frontal sinuses are found above the eyes within the forehead area. The ethmoid sinuses are located between the eyes and are more complex in structure, consisting of multiple small air cells. Therefore, the maxillary sinuses stand out as the largest, located directly below the eye sockets, which makes them the correct answer in this context.

2. Which cranial nerve is responsible for innervating the larynx and pharynx?

- A. Glossopharyngeal**
- B. Hypoglossal**
- C. Vagus**
- D. Accessory**

The cranial nerve responsible for innervating the larynx and pharynx is the vagus nerve. This nerve plays a critical role in the autonomic control of the heart, lungs, and digestive tract, but its functions related to the larynx and pharynx are particularly important for swallowing and voice production. The vagus nerve provides motor innervation to the muscles of the pharynx (except for the tensor veli palatini, which is innervated by the mandibular branch of the trigeminal nerve) and the intrinsic muscles of the larynx, facilitating phonation and protecting the airway during swallowing. In contrast, the glossopharyngeal nerve is primarily responsible for sensory functions in the throat and plays a more limited role in pharyngeal movement compared to the vagus. The hypoglossal nerve primarily innervates the muscles of the tongue and is not involved in laryngeal or pharyngeal innervation. The accessory nerve mainly provides motor function to the sternocleidomastoid and trapezius muscles, which are responsible for shoulder and neck movement, and does not innervate the larynx or pharynx.

3. Which of these microbes is least likely to be associated with wound infections?

- A. Escherichia coli**
- B. Staphylococcus**
- C. Clostridium perfringens**
- D. Treponema pallidum**

Treponema pallidum is primarily known as the causative agent of syphilis, a sexually transmitted infection, rather than a pathogen associated with wound infections. This bacterium is not typically found in the types of bacterial flora that infect wounds. Other options represent microorganisms commonly linked to wound infections. Escherichia coli, Staphylococcus species, and Clostridium perfringens are frequently implicated in various wound infections. For example, Staphylococcus aureus is known to cause skin infections and can easily enter through broken skin, while E. coli can lead to infections in wounds that have been contaminated with fecal matter. Clostridium perfringens is associated with gas gangrene, a serious condition that occurs in wounds exposed to anaerobic conditions. Thus, Treponema pallidum stands out as the microbe least likely to be involved in wound infections, making it the correct answer in this context.

4. Fe²⁺ is formed when iron undergoes which of the following processes?

- A. Loses 2 protons.**
- B. Gains 2 protons.**
- C. Loses 2 electrons.**
- D. Gains 2 electrons.**

The formation of Fe²⁺ occurs when iron atoms lose two electrons. This process is critical to understanding oxidation states in chemistry. When an iron atom loses two electrons, it results in a positive charge because electrons carry a negative charge. The loss of these two negatively charged electrons transforms iron from its neutral state to a cation with a +2 charge, represented as Fe²⁺. This process typically takes place in various chemical reactions, including redox reactions, where the iron is oxidized. The concept of oxidation, where an atom loses electrons, is fundamental in the study of elements and their behavior in different environments. Recognizing this principle is essential for anyone studying chemistry or related fields, particularly in understanding how ions form and react with other substances.

5. What is true about capillary filtration pressure at the arterial end of the capillary?

- A. Blood flows toward the venous end.**
- B. Most water is filtered into the interstitium.**
- C. Oncotic pressure is greater than capillary pressure.**
- D. There is no net movement of fluid.**

Capillary filtration pressure at the arterial end of the capillary is characterized by a higher hydrostatic pressure compared to oncotic pressure. This high hydrostatic pressure causes the movement of water and small solutes from the blood into the interstitial space, resulting in filtration. During this phase, the tendency is for fluid to move out of the capillaries into the surrounding interstitium, contributing to tissue perfusion and nutrient exchange. In healthy capillary function, the hydrostatic pressure is sufficient enough to push most of the water, along with dissolved nutrients and oxygen, out into the interstitium, where cells can access these essential elements. Consequently, the notion that most water is filtered into the interstitium accurately reflects what occurs at the arterial end of the capillary. The other answer choices address different aspects of capillary dynamics that do not hold true under typical conditions. Blood does not flow toward the venous end; instead, it is the pressure gradient that influences the movement of fluids. Oncotic pressure, primarily contributed by plasma proteins, is lower than capillary hydrostatic pressure at this point, meaning it does not exceed it. Lastly, there is significant movement of fluid out of the bloodstream, rather than no net movement.

6. What is the main role of the mesentery in the human body?

- A. Transport blood**
- B. Support abdominal organs**
- C. Secrete digestive enzymes**
- D. Absorb nutrients**

The main role of the mesentery in the human body is to support abdominal organs. The mesentery is a fold of peritoneum that attaches the intestines to the posterior abdominal wall, providing structural support and helping to maintain the position of the intestines within the abdominal cavity. Additionally, it serves as a conduit for blood vessels, nerves, and lymphatics that supply the intestines, making it crucial for the vascular and nervous supply essential for intestinal function. Transporting blood is primarily handled by blood vessels, and while the mesentery contains blood vessels, its primary function is not blood transport. Similarly, secretions like digestive enzymes are produced by specific glands and organs, such as the pancreas and salivary glands, rather than the mesentery. While the mesentery is involved in nutrient absorption indirectly, as it supports the intestines where absorption occurs, its primary role is to provide stabilization and support for the abdominal organs. Therefore, supporting abdominal organs is the most accurate description of the mesentery's main function.

7. From where do most intracranial aneurysms arise?

- A. Ventricular system
- B. Cavernous sinus
- C. Internal carotid
- D. Circle of Willis**

Intracranial aneurysms most commonly arise from the Circle of Willis, which is a circular system of arteries located at the base of the brain. This structure provides collateral blood flow between the major arteries, and it is where the internal carotid arteries and the vertebral arteries converge. The hemodynamic stress within this area, coupled with variations in arterial wall structure, contributes to the relatively high incidence of aneurysm formation. The Circle of Willis is particularly susceptible to aneurysms, especially at the junctions of the anterior communicating artery with the anterior cerebral artery, the posterior communicating artery with the internal carotid artery, and at other branching points. Understanding the anatomy and hemodynamics of this area is critical in the study of cerebrovascular diseases and conditions related to intracranial aneurysms. In contrast, while other areas such as the internal carotid artery do play a role in the overall circulation and can be associated with aneurysms, they are less commonly cited as primary sites of aneurysm formation compared to the Circle of Willis. The ventricular system and cavernous sinus are not typical locations for aneurysm origins, as they do not have the same combination of anatomical and hemodynamic factors conducive to aneurysm development.

8. Which system is responsible for preventing the growth of virulent pathogens?

- A. Adaptive immune system.**
- B. Antibiotics.
- C. Resident flora.
- D. Circulatory system.

The adaptive immune system is crucial in protecting the body against virulent pathogens through its ability to recognize and respond to specific antigens. This system consists of specialized cells, including T-lymphocytes and B-lymphocytes, which provide a targeted immune response. When a pathogen enters the body, the adaptive immune system can remember previous encounters, enabling a quicker and more efficient response upon subsequent exposures. This memory function and the ability to produce antibodies specifically tailored to neutralize invaders are fundamental to preventing infections caused by virulent pathogens. Other systems mentioned, such as antibiotics, are tools used to combat bacterial infections but do not provide a biological mechanism for ongoing protection. Resident flora provides a level of competition against pathogenic microorganisms but does not specifically target virulent pathogens. The circulatory system plays a role in transporting immune cells and antibodies throughout the body but does not directly prevent pathogen growth. Hence, the correct answer highlights the critical role of the adaptive immune system in immune defense against pathogens.

9. Amebic dysentery and giardiasis are caused by which type of pathogen?

- A. Mycotic infections**
- B. Worm infestations**
- C. Caused by salmonella**
- D. Caused by protozoan parasites**

Amebic dysentery and giardiasis are both illnesses caused by protozoan parasites, which are single-celled organisms. Protozoa are notable for their ability to live and multiply in various environments, including in human hosts where they can cause disease. In the case of amebic dysentery, the causative agent is *Entamoeba histolytica*, which invades the intestinal lining and can lead to severe gastrointestinal symptoms. Giardiasis is caused by *Giardia lamblia*, which affects the small intestine and creates symptoms such as diarrhea and abdominal discomfort. Understanding the nature of these pathogens is essential because it impacts treatment approaches and prevention strategies. Treating infections caused by protozoan parasites often involves specific antiparasitic medications, highlighting the importance of accurate identification of the pathogen responsible for the diseases. Other potential types of pathogens, such as those related to mycotic infections or worm infestations, do not contribute to these specific illnesses. Similarly, while salmonella is a bacterial pathogen responsible for gastrointestinal illness, it is not involved in amebic dysentery or giardiasis.

10. Which of the following medications can relieve pain without causing a loss of consciousness?

- A. Antibiotics**
- B. Analgesics**
- C. Sedatives**
- D. Antidepressants**

Analgesics are specifically designed to relieve pain without inducing loss of consciousness. This class of medications works by targeting the pain pathways in the nervous system, providing effective pain relief while allowing the individual to remain fully aware and alert. Common examples of analgesics include non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen and acetaminophen, as well as opioids, which are stronger but also can control pain efficiently without sedation when used appropriately. In contrast, antibiotics combat bacterial infections, but they do not have any analgesic properties. Sedatives, on the other hand, are used to calm or sedate a patient and can lead to drowsiness or unconsciousness, making them unsuitable for pain relief situations where awareness is necessary. Antidepressants may help with chronic pain management as part of a broader treatment plan, but they are not primarily designed for pain relief and do not act as straightforward analgesics.

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://nbstsast.examzify.com>

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

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