

NAIL TECH BONES AND CELLS PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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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. What structure acts as a barrier for the cell and has selective permeability?**
 - A. Cytoplasm
 - B. Cell Membrane
 - C. Nuclear Envelope
 - D. Cell Wall

- 2. What muscle bends the foot up and extends the toes?**
 - A. Tibialis Anterior
 - B. Extensor Digitorum Longus
 - C. Gastrocnemius
 - D. Fibularis Longus

- 3. What is the primary treatment for fungal nail infections?**
 - A. Moisturizers
 - B. Antifungal medications
 - C. Antibiotics
 - D. Herbal remedies

- 4. What component does the skeletal system not store?**
 - A. Calcium
 - B. Iron
 - C. Sodium
 - D. Magnesium

- 5. How can proper nutrition influence nail health?**
 - A. A balanced diet promotes nail splitting
 - B. A diet lacking in vitamins strengthens nails
 - C. A balanced diet supports nail strength and growth
 - D. Nutrition has no effect on nail health

- 6. What bone structure forms the tip of each finger?**
 - A. Proximal phalanx
 - B. Distal phalanx
 - C. Metacarpal
 - D. Carpal

- 7. What muscle rotates your hand so it faces upward?**
- A. Flexor Carpi
 - B. Supinator
 - C. Abductor Pollicis
 - D. Pronator Teres
- 8. What is the term for a nail that develops a white spot due to trauma?**
- A. Leukonychia
 - B. Onycholysis
 - C. Paronychia
 - D. Onychomycosis
- 9. What is the anatomical term for the cuticle found at the base of the nail?**
- A. Eponychium
 - B. Hyponychium
 - C. Nail fold
 - D. Perionychium
- 10. Which organelle is known as the power house of the cell that takes in nutrients to create energy?**
- A. Mitochondria
 - B. Ribosomes
 - C. Nucleus
 - D. Endoplasmic Reticulum

Answers

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

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Explanations

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1. What structure acts as a barrier for the cell and has selective permeability?

- A. Cytoplasm
- B. Cell Membrane**
- C. Nuclear Envelope
- D. Cell Wall

The cell membrane is essential in maintaining the integrity of the cell and plays a vital role in its functionality. It acts as a selective barrier, controlling what enters and exits the cell. This selective permeability is crucial for the cell's homeostasis, allowing necessary nutrients to enter while keeping out harmful substances and helping to expel waste products. The structure of the cell membrane consists of a phospholipid bilayer with embedded proteins, which contribute to its ability to selectively allow materials to pass through based on size, charge, and solubility. This function is fundamental for all living cells, enabling them to communicate with their environment and respond appropriately to changes. Other structures mentioned, while important in their own right, either serve different primary functions (such as the cytoplasm, which houses organelles), provide protection (like the cell wall in plant cells), or separate the nucleus from the cytoplasm (the nuclear envelope), but do not perform the selective barrier function in the way the cell membrane does.

2. What muscle bends the foot up and extends the toes?

- A. Tibialis Anterior
- B. Extensor Digitorum Longus**
- C. Gastrocnemius
- D. Fibularis Longus

The muscle responsible for bending the foot upward (dorsiflexion) and extending the toes is the extensor digitorum longus. This muscle is located in the anterior compartment of the leg and plays a crucial role in allowing the toes to extend while also contributing to the movement of the foot at the ankle joint. When the extensor digitorum longus contracts, it pulls on the tendons that extend toward the toes, allowing for the extension needed for activities like walking and running. The tibialis anterior also assists in dorsiflexion, but its primary action is to lift the foot without significant involvement in toe extension. The gastrocnemius is primarily a plantar flexor of the foot and does not contribute to dorsiflexion or toe extension. The fibularis longus is mainly involved in eversion and plantar flexion of the foot rather than bending the foot upward or extending the toes. Each of these muscles has its specific functions, reinforcing the role of the extensor digitorum longus in bending the foot up and extending the toes.

3. What is the primary treatment for fungal nail infections?

- A. Moisturizers
- B. Antifungal medications**
- C. Antibiotics
- D. Herbal remedies

The primary treatment for fungal nail infections is antifungal medications. These medications are specifically designed to target and eliminate the fungi causing the infection. Fungal nail infections can be persistent and often require a systematic approach for effective treatment. Antifungal treatments include both topical options, which are applied directly to the affected nail, and oral medications that work from within the body to eradicate the fungal pathogens. Moisturizers are used for hydration but do not have any effect on the fungi responsible for the infection, making them ineffective as a primary treatment. Antibiotics are designed to combat bacterial infections, not fungal ones, and therefore would not address a fungal nail infection. Herbal remedies may have some anecdotal backing but lack the scientific evidence and standardization of antifungal medications, rendering them less reliable for treating such conditions. Thus, antifungal medications are the recommended and proven approach for effectively treating fungal nail infections.

4. What component does the skeletal system not store?

- A. Calcium
- B. Iron**
- C. Sodium
- D. Magnesium

The skeletal system primarily serves as a storage reservoir for important minerals, including calcium, sodium, and magnesium, which are essential for various bodily functions. Calcium is crucial for bone health and muscle contraction, while magnesium plays a vital role in numerous biochemical reactions in the body. Sodium, although more transiently involved in bodily functions, is also found in the bones as part of the structural matrix. Iron, however, is not primarily stored in the bones. Instead, it is predominantly stored in the liver, spleen, and bone marrow, associated with hemoglobin in red blood cells, where it plays a critical role in oxygen transport. While small amounts may be found in various tissues, including the bone, the skeletal system does not serve as a significant storage site for iron like it does for the other minerals mentioned. Thus, the answer identifying iron as a component not stored by the skeletal system accurately reflects the primary storage functions of bone tissue.

5. How can proper nutrition influence nail health?

- A. A balanced diet promotes nail splitting
- B. A diet lacking in vitamins strengthens nails
- C. A balanced diet supports nail strength and growth**
- D. Nutrition has no effect on nail health

Proper nutrition plays a vital role in maintaining overall health, including the health of nails. A balanced diet ensures that the body receives essential vitamins and minerals that directly contribute to the strength and growth of nails. For instance, nutrients such as biotin, zinc, protein, and vitamins A, C, D, and E are crucial for nail health. Biotin, in particular, has been shown to improve keratin infrastructure, which is the primary protein that makes up nails. This leads to nails that are less prone to breakage and more likely to grow stronger and healthier. In contrast, diets that are lacking in essential nutrients can lead to weak, brittle nails that may split or become damaged easily. This emphasizes the importance of a well-rounded diet that includes a variety of foods to support nail and overall body health. Thus, a balanced diet not only supports optimal growth but also fortifies nails against splitting and breakage, making it integral to nail care and health.

6. What bone structure forms the tip of each finger?

- A. Proximal phalanx
- B. Distal phalanx**
- C. Metacarpal
- D. Carpal

The distal phalanx is the bone structure that forms the tip of each finger. Each finger consists of three phalanges—proximal, middle, and distal—except for the thumb, which has two (proximal and distal). The distal phalanx is the furthest from the hand and is responsible for supporting the fingertip, providing stability and a surface for the fingernail to attach. This structure is crucial for dexterity and grip, allowing for precise movements and functions of the fingers. In terms of anatomy, the proximal phalanx occurs nearer to the hand (closer to the metacarpals). The metacarpal bones, which are the bones of the hand that connect to the fingers, provide the framework of the hand, while carpal bones are the wrist bones that support the hand's structure. Understanding the relationships and locations of each of these bones helps clarify why the distal phalanx is specifically responsible for forming the tip of each finger.

7. What muscle rotates your hand so it faces upward?

- A. Flexor Carpi
- B. Supinator**
- C. Abductor Pollicis
- D. Pronator Teres

The muscle that rotates your hand to face upward is the Supinator. This muscle is specifically designed for the action of supination, which is the movement that turns the palm up or forward. Located in the forearm, the Supinator wraps around the upper part of the radius and helps to rotate the radius over the ulna, effectively allowing the hand to turn palm-up. Understanding the role of the Supinator is particularly important for any activities or movements requiring wrist rotation, such as using a screwdriver or turning a door handle. The Supinator works in conjunction with other muscles like the biceps brachii, but it is the primary muscle responsible for this specific rotational movement. The Flexor Carpi, while involved in movements of the wrist, is primarily responsible for wrist flexion rather than rotation. The Abductor Pollicis pertains to the movement of the thumb, facilitating its abduction away from the hand, and the Pronator Teres is actually involved in the opposing motion known as pronation, which turns the palm downward. Therefore, the Supinator stands out as the muscle that enables the palm-up position.

8. What is the term for a nail that develops a white spot due to trauma?

- A. Leukonychia**
- B. Onycholysis
- C. Paronychia
- D. Onychomycosis

The term for a nail that develops a white spot due to trauma is leukonychia. This condition occurs when the nail matrix is damaged, often from physical injuries or trauma to the nail area, leading to the appearance of white spots or lines on the nail surface. These white marks may remain as the nail grows out, indicating the spot where the trauma occurred. Leukonychia can manifest in various forms, such as partial or total white discoloration of the nails, but the white spots specifically indicate localized trauma rather than systemic causes or infections, which distinguishes it from other conditions. For instance, the other terms refer to different nail issues: onycholysis is separation of the nail from the nail bed, paronychia is an infection of the skin surrounding the nail, and onychomycosis refers to a fungal infection of the nail. Each of these conditions has distinct causes and symptoms, making leukonychia the correct answer for a nail that has developed a white spot specifically due to trauma.

9. What is the anatomical term for the cuticle found at the base of the nail?

- A. Eponychium**
- B. Hyponychium
- C. Nail fold
- D. Perionychium

The anatomical term for the cuticle at the base of the nail is known as the eponychium. This structure is located at the junction of the nail plate and the surrounding skin, and it acts as a protective barrier. The eponychium helps to shield the area between the skin and the nail plate from pathogens, thus preventing infections and contributing to the overall health of the nail. The other terms listed refer to different components related to the nail anatomy: - The hyponychium is the area of skin under the free edge of the nail. - The nail fold refers to the skin that surrounds the nail on its sides and base, which supports and protects the nail structure. - The perionychium encompasses both the eponychium and the lateral nail folds, representing the area that includes both the cuticle and the surrounding skin. Understanding these distinctions enhances the knowledge of nail anatomy and its related protective functions.

10. Which organelle is known as the power house of the cell that takes in nutrients to create energy?

A. Mitochondria

B. Ribosomes

C. Nucleus

D. Endoplasmic Reticulum

The mitochondria are often referred to as the powerhouse of the cell because they play a critical role in energy production. They convert nutrients, particularly carbohydrates and fats, into adenosine triphosphate (ATP) through the process of cellular respiration. This ATP then serves as the primary energy currency of the cell, powering various cellular processes and activities. The structure of mitochondria, with their inner and outer membranes, facilitates the complex biochemical reactions required for this energy conversion. In contrast, ribosomes are responsible for protein synthesis but do not generate energy. The nucleus is the control center of the cell, housing genetic information, while the endoplasmic reticulum is involved in protein and lipid synthesis and does not directly produce energy. Understanding the specific function of mitochondria helps appreciate their significance in cellular metabolism and energy management.

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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:

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

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