

NCSF FUNCTIONAL ANATOMY PRACTICE TEST (SAMPLE)

STUDY GUIDE



Prepare with structure. Pass with confidence



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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 is the effect of an anterior pelvic tilt on spinal curvature?**
 - A. It enhances the natural curves of the spine
 - B. It flattens the cervical curve
 - C. It alters the lumbar spine curvature
 - D. It has no effect on spinal curvature
- 2. What is the function of the semimembranosus muscle?**
 - A. Adducts and rotates thigh
 - B. Adducts and flexes thigh
 - C. Extends thigh; flexes and medially rotates leg
 - D. Plantar flexes foot
- 3. What is the primary action that occurs at a hinge joint?**
 - A. Rotation
 - B. Abduction
 - C. Flexion and extension
 - D. Adduction
- 4. What is the main characteristic of movement termed "retraction"?**
 - A. Moving towards anterior surface
 - B. Returning to the anatomical position
 - C. Extending the limbs outward
 - D. Bending at a joint
- 5. Which bone is commonly referred to as the collarbone?**
 - A. Sternum
 - B. Scapula
 - C. Clavicle
 - D. Humerus
- 6. By what age has 90% of bone mass typically been attained?**
 - A. 16
 - B. 18
 - C. 21
 - D. 30

- 7. Which of the following muscles would be engaged during an action that requires hip flexion?**
- A. Gluteus maximus
 - B. Rectus femoris
 - C. Hamstrings
 - D. Gastrocnemius
- 8. Which pelvic movement would affect the curvature of the spine by tilting backward?**
- A. Anterior pelvic tilt
 - B. Neutral pelvic tilt
 - C. Posterior pelvic tilt
 - D. Lateral pelvic tilt
- 9. What action is associated with the rectus femoris muscle?**
- A. Extends leg and flexes thigh
 - B. Abducts thigh
 - C. Laterally rotates thigh
 - D. Adducts thigh
- 10. Which type of joint is the hip joint classified as?**
- A. Pivot joint
 - B. Ball-and-socket joint
 - C. Hinge joint
 - D. Saddle joint

Answers

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

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Explanations

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1. What is the effect of an anterior pelvic tilt on spinal curvature?

- A. It enhances the natural curves of the spine
- B. It flattens the cervical curve
- C. It alters the lumbar spine curvature**
- D. It has no effect on spinal curvature

An anterior pelvic tilt significantly influences the curvature of the lumbar spine. When the pelvis tilts forward, it can cause the lumbar spine to assume a more exaggerated lordotic curve, leading to increased arching in the lower back. This change occurs because the tilt shifts the alignment of the pelvis in relation to the spine, prompting alterations in the distribution of forces along the vertebrae and resultant spinal curves. As the pelvis tilts anteriorly, the lumbar vertebrae tend to extend more, contributing to heightened lumbar lordosis. This alteration can impact overall posture and may lead to discomfort or pain if not properly addressed, highlighting the importance of maintaining neutral pelvic positioning to support healthy spinal alignment. Understanding this relationship between pelvic position and spinal curvature is critical for professionals addressing postural issues and designing effective movement strategies.

2. What is the function of the semimembranosus muscle?

- A. Adducts and rotates thigh
- B. Adducts and flexes thigh
- C. Extends thigh; flexes and medially rotates leg**
- D. Plantar flexes foot

The semimembranosus muscle plays a crucial role in the movement of the thigh and leg. Its primary functions include extending the thigh at the hip joint and facilitating flexion and medial rotation of the leg at the knee joint. When the semimembranosus contracts, it helps to pull the thigh backward, which is essential for movements such as walking or running. Additionally, when the knee is bent, the semimembranosus aids in the medial rotation of the leg. This dual function—extension of the thigh and flexion combined with medial rotation of the leg—makes this muscle vital for maintaining stability and mobility in lower body movements. The other options do not accurately describe the functions of the semimembranosus. For instance, adducting the thigh is not a primary function of this muscle, and plantar flexion pertains to muscles located in the calf rather than the semimembranosus. Thus, the correct choice highlights the essential actions of this muscle in leg movement and stabilization.

3. What is the primary action that occurs at a hinge joint?

- A. Rotation
- B. Abduction
- C. Flexion and extension**
- D. Adduction

The primary action that occurs at a hinge joint is flexion and extension. Hinge joints, such as the elbow and knee, allow movement predominantly in one plane, which involves bending (flexion) and straightening (extension) of the bones that form the joint. This uniaxial movement enables the angle between the two connected bones to decrease during flexion and increase during extension, effectively functioning like the hinge of a door. In contrast, other movements mentioned, such as rotation, abduction, and adduction, are characteristic of different types of joints. For instance, rotation is a movement that occurs at ball-and-socket joints, while abduction and adduction typically occur in planes that involve lateral movements, which hinge joints do not accommodate effectively.

4. What is the main characteristic of movement termed "retraction"?

- A. Moving towards anterior surface
- B. Returning to the anatomical position**
- C. Extending the limbs outward
- D. Bending at a joint

The main characteristic of movement termed "retraction" refers to the backward movement of a body part towards the posterior aspect of the body, often associated with the scapulae (shoulder blades) as they move closer together along the back. In a retraction movement, there is typically a return to a more neutral position from an anteriorly positioned state, effectively realigning the structure to a standard anatomical orientation. The correct answer reflects this concept, as retraction can be understood as a return or adjustment towards a central or anatomical position. With movements like the shoulder blades during exercises such as rows or during various upper body postures, retraction serves to stabilize and align the shoulders, which is essential for proper biomechanics and posture. In contrast, the other choices describe different types of movements that do not encompass the essence of retraction. Moving towards the anterior surface refers to protraction, which is the opposite of retraction. Extending the limbs outward and bending at a joint represent other fundamental movements, but they do not relate specifically to the concept of bringing parts back together or aligning them in a posterior manner as retraction does.

5. Which bone is commonly referred to as the collarbone?

- A. Sternum
- B. Scapula
- C. Clavicle**
- D. Humerus

The bone commonly referred to as the collarbone is the clavicle. This long, slender bone serves as a key structural component of the shoulder girdle, connecting the arm to the body. It functions to stabilize the shoulder and allows for a wide range of motion in the arms. The clavicle is located horizontally across the front of the thoracic cage, extending from the sternum to the acromion of the scapula. Its positioning makes it easily palpable beneath the skin and gives it the commonly known name "collarbone." Understanding the role of the clavicle is essential in anatomy and kinesiology, as it plays a critical part in movements involving the upper limb, as well as in protecting the underlying nerves and blood vessels.

6. By what age has 90% of bone mass typically been attained?

- A. 16
- B. 18**
- C. 21
- D. 30

The attainment of bone mass is a crucial aspect of skeletal health, particularly during the growth phases of childhood and adolescence. By around the age of 18, a significant percentage of an individual's peak bone mass is typically reached—about 90%. This period is essential as the body experiences rapid growth and development influenced by various factors including genetics, nutrition, and physical activity. After reaching this milestone, bone mass continues to develop, but the rate of accumulation slows down significantly. By the early twenties, most individuals achieve their peak bone mass, which lays the foundation for bone health throughout the lifespan. Identifying this critical age can assist in understanding strategies for optimizing bone health, especially through promoting weight-bearing exercises and ensuring adequate calcium and vitamin D intake during these formative years. Recognizing this peak development phase is vital because it highlights the importance of proactive measures earlier in life to minimize the risk of osteoporosis and related conditions later on.

7. Which of the following muscles would be engaged during an action that requires hip flexion?

- A. Gluteus maximus
- B. Rectus femoris**
- C. Hamstrings
- D. Gastrocnemius

The rectus femoris is the correct choice because it is one of the muscles that specifically functions as a hip flexor. It is part of the quadriceps group and crosses both the hip and the knee joints. When the hip joint flexes, the rectus femoris contracts, helping to lift the thigh towards the torso. This action is essential in movements such as running, kicking, and climbing. While the gluteus maximus is primarily involved in hip extension and the hamstrings are mainly responsible for knee flexion and hip extension, the gastrocnemius is primarily a muscle involved in plantar flexion of the ankle, not hip flexion. Thus, the rectus femoris is uniquely suited for tasks involving the flexion of the hip joint.

8. Which pelvic movement would affect the curvature of the spine by tilting backward?

- A. Anterior pelvic tilt
- B. Neutral pelvic tilt
- C. Posterior pelvic tilt**
- D. Lateral pelvic tilt

The posterior pelvic tilt is the movement that results in a backward tilt of the pelvis, which influences the curvature of the spine. When the pelvis tilts posteriorly, it decreases the lumbar lordosis by flattening the lower back. This motion shifts the pelvis backward and can lead to a more neutral position of the spine, reducing excessive curvature. Understanding the mechanics of posterior pelvic tilt is essential because it often engages the abdominal muscles, which can stabilize the spine and pelvis. This movement can be particularly relevant in assessing posture and can help alleviate lower back discomfort associated with excessive anterior pelvic tilt or hyperlordosis. In contrast, other pelvic movements, such as anterior pelvic tilt or lateral pelvic tilt, would either increase spinal curvature or alter the alignment in different ways that do not contribute to a backward tilt of the pelvis.

9. What action is associated with the rectus femoris muscle?

- A. Extends leg and flexes thigh**
- B. Abducts thigh
- C. Laterally rotates thigh
- D. Adducts thigh

The rectus femoris muscle is a key muscle of the quadriceps group located in the anterior compartment of the thigh. Its primary actions include extending the leg at the knee joint and flexing the thigh at the hip joint. This dual functionality arises because the rectus femoris crosses both the hip and knee joints. The extension of the leg is crucial during activities such as walking, running, and jumping, while the ability to flex the thigh aids in movements like kicking a soccer ball or climbing. The unique positioning and attachment points of the rectus femoris enable it to play a significant role in activities that require both leg extension and hip flexion simultaneously. This anatomical structure and functionality clearly support the assertion that it extends the leg and flexes the thigh.

10. Which type of joint is the hip joint classified as?

- A. Pivot joint
- B. Ball-and-socket joint**
- C. Hinge joint
- D. Saddle joint

The hip joint is classified as a ball-and-socket joint, which is characterized by one bone with a spherical or rounded end, fitting into a cup-like cavity of another bone. This structure allows for a wide range of motion, including flexion, extension, abduction, adduction, and rotation. The design of the hip joint provides both stability and mobility, essential for activities such as walking, running, and climbing. In contrast, pivot joints, such as the atlantoaxial joint in the neck, allow for rotational movement around a single axis, but do not provide the same degree of multidirectional motion as the hip joint. Hinge joints, like the knee and elbow, permit movement primarily in one plane (flexion and extension) and restrict rotational movement. Saddle joints, found in areas like the base of the thumb, allow for a greater range of motion than hinge joints but are more limited compared to ball-and-socket joints. Thus, the classification of the hip joint as a ball-and-socket joint aptly describes its capabilities and functional significance in the body.

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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:

<https://ncsffunctionalanatomy.examzify.com>

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

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