

MUSCLE ACTIONS AND FUNCTIONS – ANATOMY AND MOVEMENT PRACTICE TEST (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED 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. 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 rotator cuff muscle is the primary internal rotator?**
 - A. Infraspinatus
 - B. Subscapularis
 - C. Supraspinatus
 - D. Teres minor
- 2. Which nerve innervates the biceps brachii?**
 - A. Radial nerve
 - B. Musculocutaneous nerve
 - C. Median nerve
 - D. Ulnar nerve
- 3. During a hip hinge movement such as a kettlebell swing, what is the primary role of the erector spinae?**
 - A. Stabilizes the spine and supports upright posture
 - B. Initiates hip extension
 - C. Flexes the knee
 - D. Abducts the hip
- 4. Which muscles are responsible for forearm pronation?**
 - A. Supinator
 - B. Pronator teres and pronator quadratus
 - C. Pronator teres
 - D. Biceps brachii
- 5. Which nerve innervates the biceps brachii?**
 - A. Radial nerve
 - B. Median nerve
 - C. Musculocutaneous nerve
 - D. Ulnar nerve
- 6. Which muscle is a primary dorsiflexor of the foot?**
 - A. Gastrocnemius
 - B. Tibialis anterior
 - C. Peroneus longus
 - D. Flexor digitorum longus

7. What is the primary action of the gluteus maximus?

- A. Hip adduction
- B. Hip flexion
- C. Hip internal rotation
- D. Hip extension and external rotation

8. Which muscle flexes and adducts the wrist?

- A. Flexor Carpi Ulnaris
- B. Flexor Carpi Radialis
- C. Palmaris Longus
- D. Extensor Carpi Ulnaris

9. Which muscle primarily extends the ankle?

- A. Gracilis
- B. Gastrocnemius
- C. Soleus
- D. Tibialis Anterior

10. Which statement best describes the function of the core muscles when lifting with a hip hinge?

- A. They stabilize the spine and transfer force between the upper and lower body.
- B. They primarily extend the hip.
- C. They only act during bending, not lifting.
- D. They are not involved.

Answers

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

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Explanations

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1. Which rotator cuff muscle is the primary internal rotator?

- A. Infraspinatus
- B. Subscapularis**
- C. Supraspinatus
- D. Teres minor

Internal rotation of the shoulder is produced mainly by the Subscapularis. This muscle sits on the anterior (front) surface of the scapula and attaches to the lesser tubercle of the humerus. When its fibers contract, they pull the humerus inward (medially), making it the primary internal rotator among the rotator cuff muscles. It also helps stabilize the humeral head in the glenoid during movement. The other rotator cuff muscles work in different directions: the Supraspinatus mostly initiates abduction, while the Infraspinatus and Teres Minor are the primary external rotators. So, for internal rotation, Subscapularis is the best match.

2. Which nerve innervates the biceps brachii?

- A. Radial nerve
- B. Musculocutaneous nerve**
- C. Median nerve
- D. Ulnar nerve

Understanding which nerve supplies the biceps brachii connects the muscle's function with its nerve supply. The biceps brachii is in the anterior (flexor) compartment of the arm and mainly controls elbow flexion and forearm supination. Its motor innervation comes from the musculocutaneous nerve, which arises from the lateral cord of the brachial plexus (carrying fibers from C5–C7) and travels through the arm to innervate the elbow flexors: biceps brachii, brachialis, and coracobrachialis. The radial nerve supplies the posterior compartment (like the triceps) and some forearm extensors, but not the biceps. The median and ulnar nerves primarily innervate most forearm flexors and hand muscles, not the primary motor supply to the biceps. Therefore, the musculocutaneous nerve is the correct innervation for the biceps brachii.

3. During a hip hinge movement such as a kettlebell swing, what is the primary role of the erector spinae?

- A. Stabilizes the spine and supports upright posture**
- B. Initiates hip extension
- C. Flexes the knee
- D. Abducts the hip

During a hip hinge like a kettlebell swing, the main job of the erector spinae is to stabilize the spine and keep the torso upright as the hips hinge and the weight moves. These muscles run along the back and fire to hold the spine in a neutral or slightly extended position, resisting forward flexion and protecting the spinal discs as load shifts from the hips to the upper body. They provide a counter-moment to the hip extension driven by the glutes and hamstrings, helping transfer force efficiently up the spine and into the movement. They are not the primary drivers of hip extension—that role belongs to the gluteus maximus and the hamstrings. They also don't flex the knee or abduct the hip; those actions come from other muscle groups.

4. Which muscles are responsible for forearm pronation?

- A. Supinator
- B. Pronator teres and pronator quadratus**
- C. Pronator teres
- D. Biceps brachii

Forearm pronation is the rotation that turns the radius over the ulna, so the palm faces downward. The muscles that accomplish this are the pronators: pronator teres and pronator quadratus. Pronator quadratus sits in the distal forearm as a square muscle, and when it contracts it pulls the distal radius across the ulna, producing pronation with a reliable, direct action. Pronator teres originates higher up, crossing the forearm obliquely from the medial side, and it assists by rotating the radius as well—especially useful in rapid or resisted pronation and when the elbow is flexed. The other muscle named, the supinator, does the opposite action, rotating the radius to turn the palm upward, and the biceps brachii can aid supination when the elbow is bent. So the combination of pronator teres and pronator quadratus best explains forearm pronation.

5. Which nerve innervates the biceps brachii?

- A. Radial nerve
- B. Median nerve
- C. Musculocutaneous nerve**
- D. Ulnar nerve

The main idea is which nerve supplies the motor function of the biceps brachii, the muscle that acts to flex the elbow and supinate the forearm. The biceps brachii is innervated by the musculocutaneous nerve, which arises from the lateral cords of the brachial plexus (C5–C7). This nerve travels through the coracobrachialis and then between the biceps brachii and brachialis to provide motor fibers to the biceps, enabling elbow flexion and forearm supination when the elbow is bent. It continues as the lateral antebrachial cutaneous nerve to supply sensation to the forearm. The radial nerve, in contrast, mainly supplies the posterior arm and forearm muscles (like the triceps and many extensors) and does not innervate the biceps. The median nerve mainly innervates most of the forearm flexors (and some hand muscles), while the ulnar nerve supplies intrinsic hand muscles and some forearm muscles, not the biceps. Hence, the musculocutaneous nerve is the correct innervation for the biceps brachii.

6. Which muscle is a primary dorsiflexor of the foot?

- A. Gastrocnemius
- B. Tibialis anterior**
- C. Peroneus longus
- D. Flexor digitorum longus

Dorsiflexion at the ankle is carried out mainly by the tibialis anterior. This muscle sits in the front of the leg and, when it contracts, pulls the foot upward toward the shin and helps invert the foot. It's the primary dorsiflexor, essential for clearing the foot during the swing phase of walking. The gastrocnemius is primarily a plantarflexor through the Achilles tendon and also crosses the knee, so it doesn't dorsiflex. The peroneus longus everts the foot and assists with plantarflexion, not dorsiflexion. The flexor digitorum longus mainly flexes the toes and assists with plantarflexion, with little to do with dorsiflexion.

7. What is the primary action of the gluteus maximus?

- A. Hip adduction
- B. Hip flexion
- C. Hip internal rotation
- D. Hip extension and external rotation**

The primary action of the gluteus maximus is hip extension with external rotation. Its fibers run from the posterior pelvis to the femur and, when it contracts, they pull the thigh backward, extending the hip—especially when the hip is already flexed, such as standing up from a chair or climbing stairs. At the same time, the muscle's orientation supports rotating the thigh outward, contributing to external rotation. That combination is why it's the main function. Hip adduction, flexion, and internal rotation are not the primary roles of this muscle. Adduction is mainly handled by the adductor group, flexion by hip flexors like the iliopsoas, and internal rotation by other rotators such as gluteus medius/minimus.

8. Which muscle flexes and adducts the wrist?

- A. Flexor Carpi Ulnaris**
- B. Flexor Carpi Radialis
- C. Palmaris Longus
- D. Extensor Carpi Ulnaris

When you bend the wrist and bring the hand toward the pinky side, the muscle that does both actions best is the one on the ulnar side of the forearm. The flexor carpi ulnaris crosses the wrist on that side and, when it contracts, it flexes the wrist and pulls the hand toward the ulna (ulnar deviation). Its tendon attaches to the pisiform and the base of the fifth metacarpal, aligning its pull to produce both flexion and adduction. In contrast, the flexor carpi radialis flexes the wrist and moves the hand toward the thumb side (radial deviation), the palmaris longus mainly tenses the palmar fascia with flexion and has little effect on deviation, and the extensor carpi ulnaris extends the wrist and mainly contributes to ulnar deviation rather than flexion. So the flexor carpi ulnaris is the one that both flexes and adducts the wrist.

9. Which muscle primarily extends the ankle?

- A. Gracilis
- B. Gastrocnemius
- C. Soleus**
- D. Tibialis Anterior

Extending the ankle means plantarflexion at the ankle joint. The main muscles that do this are the soleus and the gastrocnemius, together forming the calf group that pulls on the Achilles tendon to push the foot downward. The soleus stands out as the primary ankle extender because it crosses only the ankle joint, providing strong, steady plantarflexion especially during standing and low-intensity movements. It isn't affected by knee position, so its contribution to ankle extension is reliable. The gastrocnemius also plantarflexes the ankle, but it crosses the knee as well, so its ability to extend the ankle depends on how bent the knee is; when the knee is flexed, its effectiveness decreases. It also has a knee-flexing role, which can obscure its function as an ankle extensor. The other muscles listed don't plantarflex the ankle—tibialis anterior dorsiflexes the foot, and gracilis acts on the thigh. Hence, the soleus is the best answer for the primary ankle extensor.

10. Which statement best describes the function of the core muscles when lifting with a hip hinge?

A. They stabilize the spine and transfer force between the upper and lower body.

B. They primarily extend the hip.

C. They only act during bending, not lifting.

D. They are not involved.

During a hip hinge, the core muscles act as a stabilizing pillar that keeps the spine neutral and stiff while you hinge at the hips. By bracing the abdomen and managing intra-abdominal pressure, they prevent unwanted spinal flexion or collapse, allowing the force generated by the legs and hips to be transmitted up to the upper body efficiently. This stability is what makes the movement safe and powerful, especially when lifting loads, because the core provides a solid platform for the hip extensors (glutes and hamstrings) to work from. So the core's job is to stabilize and transfer force, not to extend the hip itself. They're engaged throughout the movement, both lowering and lifting, and not uninvolved.

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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://muscleandmovement.examzify.com>

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

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