NSCA Sprinting and Running Practice Test (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

1. **In Maximum Velocity late support concentric plantar flexion, what is the primary effect?**

   A. Aids in propulsion.

   B. Propels center of gravity forward.

   C. Absorbs landing shock.

   D. Rotates trunk for takeoff.

2. **In subelite sprinters, the rear hip angle at the start is which angle?**

   A. 80 degrees

   B. 90 degrees

   C. 100 degrees

   D. 110 degrees

3. **During sprint start, the hand moves toward the forehead to enhance momentum and overcome inertia. The correct directional description is:**

   A. Toward the forehead

   B. Toward the hip

   C. Toward the chin

   D. Toward the shoulder

4. **Where are the eyes focused during sprint acceleration?**

   A. Focused straight ahead

   B. Down at the feet

   C. To the side

   D. Upward into the crowd

5. **Forward body lean during acceleration decreases from less than which degree range to less than which degree range as stride length increases?**

   A. <45 to <5 degrees

   B. <30 to <10 degrees

   C. <60 to <15 degrees

   D. <20 to <2 degrees

6. During late flight, which action limits knee extension and stops before foot strike?

A. Eccentric knee flexion

B. Concentric knee flexion

C. Eccentric knee extension

D. Isometric knee flexion

7. During Maximum Velocity, leg drive is facilitated by which action?

A. Explosive arm action

B. Gentle arm action

C. No arm action

D. Relaxed arm action

8. In Maximum Velocity Late flight, concentric hip extension is described as which of the following?

A. Rotates thigh backward in preparation for foot contact

B. Rotates thigh forward

C. No rotation

D. Rotates tibia inward

9. Which of the following is a plausible cause of feet turned excessively outward during maximum velocity?

A. Faulty Running form

B. Weak ankle dorsiflexion

C. Excessive heel strike

D. Poor hip flexor strength

10. During Maximum Velocity early support in eccentric plantar flexion, this action primarily provides what function?

A. helps absorb shock and control forward rotation of tibia over ankle.

B. resists tendency of hip/ankle extension to hyperextend knee; absorbs landing shock.

C. decelerates backward thigh rotation; rotates trunk in preparation for forward takeoff.

D. propels center of gravity forward.

Answers

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

Explanations

1. In Maximum Velocity late support concentric plantar flexion, what is the primary effect?

A. Aids in propulsion.

B. Propels center of gravity forward.

C. Absorbs landing shock.

D. Rotates trunk for takeoff.

During late support, the ankle plantar flexors contract concentrically to push the ground backward. That action creates a reaction force with a forward component, which drives the body forward and increases the forward velocity of the center of mass. The primary effect here is propulsion—the push-off that supplies the forward impulse needed for sprint speed. Absorbing landing shock comes mainly from the eccentric actions earlier in stance, not from this concentric plantar flexion, and rotating the trunk for takeoff is a separate, less direct consequence of overall sprint mechanics. In maximal velocity sprinting, powerful concentric plantar flexion at late stance provides the key propulsive impulse that speeds you up.

2. In subelite sprinters, the rear hip angle at the start is which angle?

A. 80 degrees

B. 90 degrees

C. 100 degrees

D. 110 degrees

At the start, the rear hip angle describes how flexed the hip is between the torso and the rear thigh. In subelite sprinters, this angle is about 90 degrees. That means the trunk is forward-leaning and the rear thigh is roughly perpendicular to the torso, creating a solid base for immediate hip and knee extension when the blocks release. This position helps direct force into the track to maximize horizontal acceleration right from the first step. If the angle were larger than 90, the torso would be more upright and the initial drive would be less efficient; if it were smaller than 90, the hip would be over-flexed, limiting hip extension and potentially increasing knee stress. So, a rear hip angle near 90 degrees best supports a powerful, early-drive start in subelite sprinters.

3. During sprint start, the hand moves toward the forehead to enhance momentum and overcome inertia. The correct directional description is:

A. Toward the forehead

B. Toward the hip

C. Toward the chin

D. Toward the shoulder

During sprint starts, turning leg power into forward speed depends on how you move the arms to help drive the body forward. The hand moving toward the forehead describes the common drive path of the arm during the initial acceleration: the elbow drives back and the hand travels forward and upward toward the face. This path helps align the force you generate with the direction you want to move, helping pull the torso forward and keep the trunk stable as you accelerate. In short, this arm action creates a forward component of force that contributes to momentum and helps you overcome inertia. If the hand were moving toward the hip, chin, or shoulder, the force path would be less aligned with forward propulsion and could disrupt posture or waste energy instead of adding to horizontal acceleration. Focusing the hand toward the forehead keeps the drive compact, efficient, and oriented to move you straight out of the block.

4. Where are the eyes focused during sprint acceleration?

A. Focused straight ahead

B. Down at the feet

C. To the side

D. Upward into the crowd

Where you direct your gaze during sprint acceleration affects posture, balance, and propulsion. Focusing straight ahead helps keep the head and neck in line with a tall, stable spine, allowing efficient hip extension and a solid, forward-driving posture as you push into the ground. It also keeps you aware of the track ahead, helping you time your steps and maintain rhythm without drifting. Looking down at the feet pulls the head forward and can collapse the upper body, reducing stride efficiency and power. Looking to the side or upward toward the crowd is distracting and breaks your line of sight to the track, which can disrupt balance and timing. So keeping eyes fixed straight ahead is the best choice.

5. Forward body lean during acceleration decreases from less than which degree range to less than which degree range as stride length increases?

A. <45 to <5 degrees

B. <30 to <10 degrees

C. <60 to <15 degrees

D. <20 to <2 degrees

During acceleration you start with a fairly pronounced forward lean to maximize horizontal force production, then gradually become more upright as stride length increases and you drive more upward and backward with each step. That progression is captured by leaning less than 45 degrees initially and reducing to less than 5 degrees as you lengthen your stride. The other ranges don't reflect this gradual shift toward an upright posture as acceleration continues.

6. During late flight, which action limits knee extension and stops before foot strike?

A. Eccentric knee flexion

B. Concentric knee flexion

C. Eccentric knee extension

D. Isometric knee flexion

In late flight, the leg must be braked as it moves toward ground contact so the knee doesn't fully extend before foot strike. This braking is provided by the knee flexors (hamstrings) contracting eccentrically. An eccentric knee flexion contraction lengthens the hamstrings under tension while controlling and slowing the knee's extension, effectively stopping the knee from reaching full extension too early. If the knee were flexing concentrically, that would actively shorten the hamstrings to bend the knee further, not limit extension as you near contact. If the knee were extending eccentrically, the quadriceps would be acting as a brake to straighten the knee, which would promote extension rather than limit it. Isometric knee flexion would hold a position but wouldn't actively regulate the speed or limit of extension as you approach foot strike.

7. During Maximum Velocity, leg drive is facilitated by which action?

A. Explosive arm action

B. Gentle arm action

C. No arm action

D. Relaxed arm action

Explosive arm action drives the whole sprinting rhythm at maximum velocity. When the arms move rapidly and forcefully, they create forward momentum and help stabilize the torso, which enables the hips to extend more powerfully and the legs to cycle faster. This coordinated upper-body drive boosts stride frequency and helps maintain a forward lean without breaking form, producing greater leg drive overall. Gentle or relaxed arm action wouldn't provide the needed momentum or coordination, and no arm action eliminates the upper-body contribution that helps set the pace for the legs. A completely still or overly relaxed arm swing also disrupts balance and rhythm, reducing hip extension and cadence. So the explosive arm action best supports the high-speed, powerful leg drive required at maximum velocity.

8. In Maximum Velocity Late flight, concentric hip extension is described as which of the following?

A. Rotates thigh backward in preparation for foot contact

B. Rotates thigh forward

C. No rotation

D. Rotates tibia inward

The key idea here is that during the late flight phase in maximum velocity sprinting, the hip extensors (like the glutes and hamstrings) contract concentrically to extend the hip. This action moves the thigh backward relative to the pelvis, so the leg trails behind in preparation for foot contact. In other words, the thigh rotates backward as the hip extends, aligning the leg for an efficient strike and next push-off. Rotating the thigh forward would be hip flexion, not extension, so that option isn't correct. There is rotation involved, so saying no rotation would be inaccurate. Rotating the tibia inward describes knee-level rotation rather than hip action, so that doesn't describe the hip extension phase either.

9. Which of the following is a plausible cause of feet turned excessively outward during maximum velocity?

A. Faulty Running form

B. Weak ankle dorsiflexion

C. Excessive heel strike

D. Poor hip flexor strength

When sprinting at maximum velocity, foot placement and orientation come from the whole pattern of your running mechanics—from pelvis stability through hip control to ankle alignment. If the form isn't efficient, the leg can rotate outward as a compensatory habit, so the foot ends up pointing more to the side than straight ahead. This toe-out is a sign that the alignment cue—keeping the knee in line with the foot and the foot under the center of mass—is being lost, often due to issues in hip control, timing, or overall running mechanics. In short, the outwardly turned foot during max speed points to a broader form pattern not being optimal, which is why faulty running form is the best explanation. Weak ankle dorsiflexion would more likely affect how high the shin comes and how the foot clears the ground, rather than causing a pronounced outward turn of the foot. Excessive heel strike is more characteristic of a slower or inefficient pattern and doesn't directly explain the toe-out at top speed. Poor hip flexor strength might limit knee lift or drive but doesn't inherently cause the foot to point outward; it's the broader form and control issues that create the toe-out during maximal effort.

10. During Maximum Velocity early support in eccentric plantar flexion, this action primarily provides what function?

A. helps absorb shock and control forward rotation of tibia over ankle.

B. resists tendency of hip/ankle extension to hyperextend knee; absorbs landing shock.

C. decelerates backward thigh rotation; rotates trunk in preparation for forward takeoff.

D. propels center of gravity forward.

The main idea is that in the early support of maximum-velocity sprinting, the ankle is driven into an eccentric plantar-flexion pattern to absorb impact. The plantar-flexor muscles (like the gastrocnemius and soleus) lengthen as the foot contacts the ground, damping the landing forces and preventing the tibia from sliding too far forward over the ankle. This control helps stabilize the leg and set up a solid platform for the upcoming propulsion phase, rather than producing forward drive yet. The other options describe actions that occur later in the stance or involve different joints or motions (propulsion, trunk or thigh rotation, or knee alignment), so they don't capture the primary function of eccentric plantar flexion during that early support moment.

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://nscasprintingrunning.examzify.com

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