Orthotics and Prosthetics Combined Written Boards Practice Exam (Sample)

Study Guide

BY EXAMZIFY

Everything you need from our exam experts!

Table of Contents

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. What is Guillain-Barre disease?

A. A genetic disorder affecting muscle coordination

B. An acute inflammatory demyelinating polyneuropathy

C. A chronic muscle degeneration condition

D. A condition characterized by spinal stenosis

2. What motion does a cushioned heel simulate during impact?

A. Inversion of the foot

B. Plantarflexion of the heel

C. Dorsiflexion of the ankle

D. Rearfoot eversion

3. What disease is commonly associated with Gower's sign?

A. Becker Muscular Dystrophy

B. Duchenne Muscular Dystrophy

C. Myotonic Dystrophy

D. Spinal Muscular Atrophy

4. Which type of prosthetic knee offers the least stability?

A. Single axis knee

B. Manual locking

C. Polycentric knee

D. Outside hinges

5. What are some contraindications for a floor reaction AFO?

A. Knee laxity, muscular dystrophy

B. Genurecurvatum, coronal instability of the knee

C. Severe ankle sprains, plantar fasciitis

D. Osteoarthritis, metatarsalgia

6. Outsetting the prosthetic foot on a TT prosthesis increases pressure in what area?

A. Medial-distal

B. Lateral-proximal

C. Posterior-proximal

D. Anterior-distal

7. What action can a patient perform to check for a lesion or injury at S1?

A. Walking on toes

B. Raising the toes

C. Heel raise

D. Sitting on the ground

8. Which of the following motions occur at the ankle joint?

A. Rotation

B. Dorsiflexion and plantarflexion

C. Abduction and adduction

D. Inversion only

9. Why is a CTLSO: Milwaukee not recommended for a person with a paralytic spine?

A. The patient cannot provide active forces necessary for correction

B. The orthosis is too heavy for mobility

C. It restricts necessary spinal motion

D. The patient lacks adequate trunk support

10. What type of sockets should a bilateral TF amputee have?

A. Wide ML with high medial trimlines

B. Narrow ML with low medial trimlines

C. Symmetrical with no trimlines

D. High ML with forward trimlines

Answers

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

Explanations

1. What is Guillain-Barre disease?

A. A genetic disorder affecting muscle coordination

B. An acute inflammatory demyelinating polyneuropathy

C. A chronic muscle degeneration condition

D. A condition characterized by spinal stenosis

Guillain-Barre disease is accurately described as an acute inflammatory demyelinating polyneuropathy. This condition is characterized by the body's immune system mistakenly attacking the peripheral nervous system, leading to inflammation and damage to the myelin sheath that surrounds nerve fibers. The result is a rapid onset of muscle weakness, numbness, and sometimes paralysis that typically starts in the legs and can ascend to affect other areas of the body. The symptoms of Guillain-Barre can progress quite rapidly, often following a viral or bacterial infection, and it requires immediate medical attention. The disease's acute nature differentiates it from chronic conditions, and the specific mechanism of demyelination is central to its pathology. Understanding this allows healthcare providers to approach treatment and rehabilitation appropriately, focusing on symptomatic relief and recovery of function as the body heals. Additionally, the description does not align with the other conditions mentioned, which include genetic disorders, chronic degeneration, or structural issues such as stenosis, all of which involve different pathologies and treatment approaches.

2. What motion does a cushioned heel simulate during impact?

A. Inversion of the foot

B. Plantarflexion of the heel

C. Dorsiflexion of the ankle

D. Rearfoot eversion

The cushioned heel in footwear is designed to absorb impact forces during walking or running, specifically at the moment of heel strike. This functionality closely simulates plantarflexion of the heel. During this phase of gait, the impact created by the foot landing can initiate a motion pattern that includes the heel's downward movement towards the ground. A cushioned heel effectively acts to dampen these forces and allows for a soft transition from heel strike to midstance. This impact absorption helps facilitate smoother movement and reduces stress on the lower extremities. Understanding the mechanics of how a cushioned heel functions highlights its role in mimicking the natural plantarflexion that occurs when the foot lands and begins to transition through the gait cycle. This is critical for maintaining balance, supporting locomotion, and preventing injury during physical activities.

3. What disease is commonly associated with Gower's sign?

A. Becker Muscular Dystrophy

B. Duchenne Muscular Dystrophy

C. Myotonic Dystrophy

D. Spinal Muscular Atrophy

Gower's sign is a clinical indication often observed in patients with Duchenne Muscular Dystrophy (DMD). This sign refers to the specific way individuals struggle to rise from a sitting or lying position, which involves the use of their hands to "walk" up their thighs to support their body as they get up. Duchenne Muscular Dystrophy is a genetic disorder characterized by progressive muscle degeneration and weakness due to mutations in the dystrophin gene. The muscle weakness in individuals with DMD typically affects the proximal muscles first, making activities such as standing up from the floor particularly challenging. The use of Gower's sign illustrates this weakness: patients often cannot rely solely on their leg muscles to lift their bodies from the ground. This sign is pivotal in the clinical assessment of children suspected of having DMD and serves as an important marker in identifying the onset of muscle weakness and the progression of the disease. Understanding Gower's sign and its association with Duchenne Muscular Dystrophy helps healthcare professionals in diagnosing and managing this condition effectively.

4. Which type of prosthetic knee offers the least stability?

A. Single axis knee

B. Manual locking

C. Polycentric knee

D. Outside hinges

The choice indicating that outside hinges offer the least stability in prosthetic knees is based on their mechanical design and functionality. Outside hinge knees utilize a simple hinge mechanism that does not provide inherent stability beyond the basic range of motion. This simplicity can limit the knee's ability to effectively respond to dynamic loading and changes in gait patterns made by the user. A significant aspect of knee stability in prosthetic designs comes from the ability of the knee to provide resistance to flexion and extension under weight-bearing conditions. Outside hinge knees do not automatically lock or provide controlled motion once activated, which can lead to instability, particularly during activities like walking or negotiating slopes. In contrast, single axis knees allow for a straightforward, fixed flexion and extension motion, providing some stability with as much motion as required for ambulation. Manual locking knees offer the rider exceptional stability by locking the knee in place during stance phase, which is crucial for individuals requiring additional support or who may have limited control. Polycentric knees, which feature multiple pivot points, enhance stability and mimic natural knee function more effectively than simpler hinge designs due to their increased adaptability to different phases of gait. Thus, in comparison to these knee types, outside hinges provide a limited range of stability, which is why this option

5. What are some contraindications for a floor reaction AFO?

A. Knee laxity, muscular dystrophy

B. Genurecurvatum, coronal instability of the knee

C. Severe ankle sprains, plantar fasciitis

D. Osteoarthritis, metatarsalgia

The floor reaction ankle-foot orthosis (AFO) is specifically designed to assist with knee stability during the stance phase of walking. It functions by leveraging ground reaction forces to provide support to the knee, which can be particularly beneficial for individuals with certain lower limb weaknesses or conditions. However, there are specific contraindications for this type of device, such as genurecurvatum and coronal instability of the knee. Genurecurvatum refers to hyperextension of the knee while standing, which can be exacerbated by the floor reaction design. This condition may increase the risk of injury or discomfort if ground reaction forces are improperly applied. Similarly, coronal instability of the knee lacks sufficient lateral stability, which the floor reaction AFO may not effectively address. For individuals with these conditions, using a floor reaction AFO could lead to further knee instability or complications while walking. Other options listed may present challenges but do not directly contraindicate the use of a floor reaction AFO as explicitly as genurecurvatum or coronal knee instability. This understanding helps clinicians determine when a floor reaction AFO is suitable based on the specific biomechanical needs and conditions of their patients.

6. Outsetting the prosthetic foot on a TT prosthesis increases pressure in what area?

A. Medial-distal

B. Lateral-proximal

C. Posterior-proximal

D. Anterior-distal

Outsetting the prosthetic foot on a transtibial (TT) prosthesis laterally affects the distribution of forces during weight-bearing activities, such as walking. When the foot is positioned laterally, the center of mass shifts, leading to increased pressure on the medial aspect of the residual limb, particularly in the distal region. This lateral positioning tends to create an uneven loading pattern, where there is a higher concentration of weight and stress applied to the medial-distal area of the limb. This can produce specific implications for pressure management and skin integrity, as excess pressure in this area can lead to skin breakdown or other complications. Understanding this biomechanical relationship is vital for optimal prosthetic fitting and patient comfort, ensuring that adjustment in foot positioning is done with careful consideration of weight distribution and residual limb pressure.

7. What action can a patient perform to check for a lesion or injury at S1?

A. Walking on toes

B. Raising the toes

C. Heel raise

D. Sitting on the ground

The action that can be performed to check for a lesion or injury at the S1 nerve root is the heel raise. The S1 nerve root is primarily responsible for controlling the muscles that allow for plantar flexion of the foot, specifically the gastrocnemius and soleus muscles. By performing a heel raise, where the patient stands on their toes, it directly assesses the functioning of these muscles and consequently the integrity of the S1 nerve root. When a patient raises their heel off the ground, they activate the plantar flexor muscles. If there is a lesion or injury at the S1 level, the patient may experience weakness or inability to perform this action effectively. Thus, the heel raise is a crucial functional test for assessing the health of the S1 nerve root. Walking on toes, raising the toes, or sitting on the ground do not specifically target the S1 nerve root function as effectively as the heel raise. They might evaluate other aspects of motor function or may involve different lower extremity nerve roots. Therefore, the heel raise stands out as the most relevant action in this context.

8. Which of the following motions occur at the ankle joint?

A. Rotation

B. Dorsiflexion and plantarflexion

C. Abduction and adduction

D. Inversion only

The ankle joint primarily allows for two specific movements: dorsiflexion and plantarflexion. Dorsiflexion refers to the movement where the foot is brought closer to the shin, effectively decreasing the angle between the dorsum (top) of the foot and the leg. Conversely, plantarflexion involves pointing the toes away from the shin, increasing the angle between the top of the foot and the leg. This functional capability is essential for various activities such as walking, running, and climbing stairs. While other types of movement may occur in the surrounding joints, such as inversion (the foot rotating inward) and eversion (the foot rotating outward), the primary motions recognized specifically at the ankle joint are dorsiflexion and plantarflexion. This distinct range of motion is crucial for understanding the biomechanics involved in activities that utilize the ankle, making this option the most accurate representation of ankle joint function.

9. Why is a CTLSO: Milwaukee not recommended for a person with a paralytic spine?

A. The patient cannot provide active forces necessary for correction

B. The orthosis is too heavy for mobility

C. It restricts necessary spinal motion

D. The patient lacks adequate trunk support

A CTLSO (Cervical-Thoraco-Lumbo-Sacral Orthosis), specifically the Milwaukee type, is designed to provide support and immobilization for the spine in cases such as scoliosis or other spinal deformities. It requires the patient to generate some active forces through muscle engagement to assist in spinal correction and to benefit from the orthotic device. When dealing with a person who has a paralytic spine, there is a significant absence of voluntary muscle control in areas where the orthosis is intended to work. This lack of active muscular forces means that the corrective capabilities of the Milwaukee orthosis cannot be effectively used, rendering the device ineffective. Therefore, it becomes clear that without the patient's ability to produce the necessary active forces, the orthosis cannot fulfill its intended purpose of spinal alignment and correction. The implications of this situation include not only the potential ineffectiveness of treatment but also the risk of discomfort, malalignment, or decreased mobility due to the device being improperly suited to the patient's specific needs.

10. What type of sockets should a bilateral TF amputee have?

A. Wide ML with high medial trimlines

B. Narrow ML with low medial trimlines

C. Symmetrical with no trimlines

D. High ML with forward trimlines

For a bilateral transfemoral (TF) amputee, the optimal socket design is one that provides stability, comfort, and effective weight distribution. A narrow mediolateral (ML) width with low medial trimlines is particularly beneficial in this context because it allows for better alignment of the residual limbs while accommodating the anatomy of the individual. A narrow ML socket helps to create an efficient fit that minimizes excess movement and improves control of the prosthesis. Low medial trimlines facilitate the necessary range of motion without compromising the structural integrity of the socket, ensuring that it does not interfere with the intact anatomical features and provides support to the residual limb. This design also aids in meeting biomechanical needs by enhancing proprioception, which is vital for balance and ambulation in bilateral amputees. Overall, with the unique challenges faced by bilateral TF amputees, including balance and the need for symmetrical gait, a socket design that offers a narrow ML configuration and low medial trimlines can significantly improve function and comfort during daily activities.

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://orthoticsprostheticscombined.examzify.com

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