NBME Form 31 Practice Test (Sample)

Study Guide

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 does a-amanitin from the death cap mushroom inhibit?

A. RNA polymerase I

B. RNA polymerase II

C. RNA polymerase III

D. DNA polymerase

2. Golfer's elbow tendinopathy causes pain near which anatomical landmark?

A. Lateral epicondyle

B. Medial epicondyle

C. Radial tuberosity

D. Coronoid process

3. What is a major consequence of hyperacute transplant rejection?

A. Vascular proliferation

B. Fibrin thrombi in capillaries

C. Infiltration of lymphocytes

D. Necrosis of the graft

4. What respiratory maneuver can increase pain in cholelithiasis (gallstones)?

A. Expiration

B. Inspiration

C. Coughing

D. Sneezing

5. During bradycardia, how does it affect the duration of diastole and ventricular filling time?

A. Shortens duration, increasing preload

B. Shortens duration, reducing preload

C. Lengthens duration, increasing preload

D. Lengthens duration, reducing preload

6. What neurological symptom is characteristic of Syndenham chorea?

A. Uncontrollable muscle spasms

B. Loss of coordination

C. Involuntary irregular movements

D. Progressive muscle weakness

7. In post-stroke thalamic pain syndrome, the pain is typically?

A. Contralateral

B. Ipsi-lateral

C. Localized to the stroke area

D. Generally diffuse

8. Which of the following is a common symptom associated with cholecystitis?

A. Chronic cough

B. Shoulder pain

C. Upper quadrant pain

D. Lumbar pain

9. Broca's area is primarily located in which lobe of the brain?

A. Frontal lobe

B. Parietal lobe

C. Occipital lobe

D. Temporal lobe

10. Which of the following is NOT a side effect associated with gentamicin?

A. Ototoxicity

B. Neurotoxicity

C. Hepatotoxicity

D. Nephrotoxicity

Answers

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

Explanations

1. What does a-amanitin from the death cap mushroom inhibit?

A. RNA polymerase I

B. RNA polymerase II

C. RNA polymerase III

D. DNA polymerase

α-Amanitin, a potent toxin found in the death cap mushroom (Amanita phalloides), specifically inhibits RNA polymerase II. This enzyme is crucial for the transcription of mRNA, which is essential for protein synthesis in eukaryotic cells. By inhibiting RNA polymerase II, α-amanitin disrupts the production of mRNA, leading to a cessation of protein synthesis. This mechanism is what makes the toxin so dangerous, as it can lead to cell death and ultimately organ failure, particularly in the liver. RNA polymerase I and RNA polymerase III are responsible for synthesizing ribosomal RNA and transfer RNA, respectively, but are not affected by α-amanitin. DNA polymerase is involved in DNA replication and is also not inhibited by this compound. The specific action of α-amanitin on RNA polymerase II is what distinguishes it from other toxins and underscores its lethal potential in cases of mushroom poisoning.

2. Golfer's elbow tendinopathy causes pain near which anatomical landmark?

A. Lateral epicondyle

B. Medial epicondyle

C. Radial tuberosity

D. Coronoid process

Golfer's elbow, also known as medial epicondylitis, is characterized by pain and inflammation in the tendons that attach to the medial epicondyle of the humerus. This condition arises from repetitive wrist flexion and forearm pronation, which often happens during activities like golfing, hence the name. The pain typically presents on the inner side of the elbow, making the medial epicondyle the primary anatomical landmark associated with this tendinopathy. In contrast, the other landmarks mentioned do not align with the symptomatology of golfer's elbow. The lateral epicondyle is associated with tennis elbow, radial tuberosity does not have direct relevance to elbow tendinopathies, and the coronoid process is related to different issues such as elbow dislocations or fractures rather than tendinopathy at the medial side. Therefore, the medial epicondyle is the correct answer as it directly correlates with the location and cause of the pain in golfer's elbow.

3. What is a major consequence of hyperacute transplant rejection?

A. Vascular proliferation

B. Fibrin thrombi in capillaries

C. Infiltration of lymphocytes

D. Necrosis of the graft

Hyperacute transplant rejection is a rapid and immediate response that occurs typically within minutes to hours after transplantation, primarily due to pre-existing recipient antibodies against donor antigens, which is often a result of previous sensitization through blood transfusions or prior transplants. In this context, the formation of fibrin thrombi in capillaries is the defining feature of hyperacute rejection. When antibodies bind to the endothelium of the graft, they initiate a type of immune response that leads to complement activation and recruitment of inflammatory mediators. This cascade results in increased vascular permeability and fibrin deposition in the microvasculature of the graft, forming thrombi and ultimately causing occlusion of these blood vessels, which impairs blood supply to the graft. The immediate consequences of this process manifest as a pallor or cyanosis of the graft, and it can lead to rapid graft failure if not promptly addressed. Other immune mechanisms such as lymphocyte infiltration or necrosis may be observed in different types of rejection (e.g., acute or chronic rejection) but are not characteristic of hyperacute rejection. In summary, the presence of fibrin thrombi is a hallmark of the early, destructive immune response that typifies hyperacute transplant rejection.

4. What respiratory maneuver can increase pain in cholelithiasis (gallstones)?

A. Expiration

B. Inspiration

C. Coughing

D. Sneezing

In cholelithiasis, pain is often associated with the presence of gallstones, particularly when they obstruct the cystic duct and cause inflammation of the gallbladder, leading to a condition known as cholecystitis. During inspiration, the diaphragm moves downward, which increases the volume of the thoracic cavity and can create pressure changes in the abdominal area. This action can increase pain in patients with gallbladder inflammation because the gallbladder may be inflamed or distended and more sensitive to pressure changes. Increased intrathoracic pressure during inspiration can also lead to diaphragm expansion, which can further irritate the inflamed gallbladder. This is not usually the case with expiration, coughing, or sneezing, which may not exert the same level of pressure across the abdominal region or could involve different mechanisms that do not exacerbate the pain associated with gallstone complications. Therefore, inspiration, due to its effect on abdominal pressure and diaphragmatic movement, is the respiratory maneuver most likely to increase pain in patients with cholelithiasis.

5. During bradycardia, how does it affect the duration of diastole and ventricular filling time?

A. Shortens duration, increasing preload

B. Shortens duration, reducing preload

C. Lengthens duration, increasing preload

D. Lengthens duration, reducing preload

During bradycardia, the heart beats more slowly, which inherently increases the length of diastole—the phase of the cardiac cycle when the heart muscle relaxes and the chambers fill with blood. This extended diastolic period means that there is a longer time for ventricular filling compared to a normal or fast heart rate. With an increase in diastolic duration, the ventricles have more time to fill with blood from the atria, which consequently raises the volume of blood in the ventricles at the end of diastole. This increase in ventricular filling volume effectively enhances preload, which is the strain on the ventricular wall at the end of diastole before contraction. A higher preload can lead to a more forceful contraction based on the Frank-Starling mechanism, where the heart pumps more efficiently with increased venous return. Therefore, during bradycardia, the longer duration of diastole increases preload, supporting the correct answer.

6. What neurological symptom is characteristic of Syndenham chorea?

A. Uncontrollable muscle spasms

B. Loss of coordination

C. Involuntary irregular movements

D. Progressive muscle weakness

Syndenham chorea, also known as chorea minor, is characterized by involuntary irregular movements that are often sudden, non-repetitive, and occur in a dance-like manner. These movements can affect various parts of the body and are typically non-contextual, meaning they happen without any intention from the person. This symptom arises as a result of an autoimmune reaction that typically follows a streptococcal infection, such as rheumatic fever. Involuntary movements in Syndenham chorea can include twitching, jerking motions, and can also affect the face, arms, and legs. Patients may unexpectedly drop objects or may have difficulties with fine motor tasks. The nature of these movements is distinctive and helps differentiate this condition from other neurological disorders that may present differently, such as seizures or dystonias. Therefore, the hallmark of Syndenham chorea is the presence of these irregular, involuntary movements, making it the characteristic symptom of this disorder.

7. In post-stroke thalamic pain syndrome, the pain is typically?

A. Contralateral

B. Ipsi-lateral

C. Localized to the stroke area

D. Generally diffuse

In post-stroke thalamic pain syndrome, the pain is characteristically contralateral. This phenomenon occurs because a stroke affecting the thalamus disrupts the normal neural pathways that process sensory and pain information. When the thalamus, which serves as a relay station for sensory information from the body to the brain, is damaged on one side, it affects the sensory perception on the opposite side of the body. Patients with this syndrome experience a range of symptoms, including burning, aching pain, and an increased sensitivity to touch or pressure (allodynia) on the side of the body opposite the lesion. This contralateral presentation is a key characteristic of thalamic pain syndrome, highlighting the role of the thalamus in sensory integration and pain modulation. The other options do not accurately reflect the typical features of thalamic pain. Pain being ipsilateral would not align with the established understanding of contralateral pain processing in relation to thalamic lesions. Localizing pain strictly to the stroke area is also inconsistent, as the pain perception can extend beyond the immediate region of the damage due to the interconnected pathways involved in pain perception. Diffuse pain would not capture the specific nature of the contralateral pain commonly reported in

8. Which of the following is a common symptom associated with cholecystitis?

A. Chronic cough

B. Shoulder pain

C. Upper quadrant pain

D. Lumbar pain

Upper quadrant pain is a common symptom associated with cholecystitis, which is the inflammation of the gallbladder. This condition typically presents with acute pain in the right upper quadrant of the abdomen, often exacerbated by deep breathing or movement. The pain is usually described as severe and may be accompanied by other signs such as nausea, vomiting, fever, and possible jaundice. Cholecystitis usually occurs after a meal, especially a fatty one, due to the gallbladder's role in digestion and bile secretion. The anatomical position of the gallbladder in the right upper quadrant explains the localization of the pain experienced by patients. Understanding the typical presentation of cholecystitis can help in making a timely and accurate diagnosis, which is critical for effective treatment.

9. Broca's area is primarily located in which lobe of the brain?

A. Frontal lobe

B. Parietal lobe

C. Occipital lobe

D. Temporal lobe

Broca's area is primarily located in the frontal lobe of the brain, specifically in the left hemisphere for about 95% of right-handed individuals and a significant portion of left-handed individuals. This area is crucial for language production and is involved in the motor functions necessary for speech. It plays a pivotal role in forming words and constructing grammatically correct sentences, which is essential for effective communication. Damage to Broca's area can lead to Broca's aphasia, characterized by slow and effortful speech, accompanied by relatively preserved comprehension. The association of Broca's area with the frontal lobe highlights the region's involvement in higher cognitive functions, particularly those related to planning and coordinating speech. This anatomical and functional distinction is well-established in neuroanatomy and cognitive neuroscience, reinforcing the identification of language processing centers within the brain's structure. Understanding the location and function of Broca's area is fundamental in the study of neurology, psychology, and communication disorders.

10. Which of the following is NOT a side effect associated with gentamicin?

A. Ototoxicity

B. Neurotoxicity

C. Hepatotoxicity

D. Nephrotoxicity

Gentamicin is an aminoglycoside antibiotic primarily used to treat serious bacterial infections. It is known for several significant side effects, primarily ototoxicity, neurotoxicity, and nephrotoxicity. Ototoxicity is a well-documented side effect of gentamicin, where damage to the inner ear can lead to hearing loss or balance issues. This occurs because aminoglycosides can accumulate in the inner ear and affect the hair cells responsible for hearing and balance. Neurotoxicity, although less common than ototoxicity, can occur with aminoglycosides and may manifest as neuromuscular blockade, particularly in patients with renal impairment or those receiving high doses. Nephrotoxicity is another significant concern with gentamicin use. It can cause acute kidney injury, and patients on prolonged therapy or those with existing renal issues are particularly at risk. In contrast, hepatotoxicity is not a known side effect of gentamicin. While other antibiotics may have liver toxicity as a side effect, gentamicin predominantly affects the ears and kidneys rather than the liver. Therefore, the option indicating hepatotoxicity correctly identifies a side effect that is not associated with gentamicin.

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://nbmeform31.examzify.com

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