

NBME FORM 25 PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE

<https://nbmeform25.examzify.com>



Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	15

SAMPLE

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

SAMPLE

- 1. What is the approximate half-life of factor II (prothrombin)?**
 - A. 60 hours
 - B. 24 hours
 - C. 12 hours
 - D. 36 hours
- 2. What is a potential cause of polyhydramnios?**
 - A. Placental insufficiency
 - B. Fetal renal agenesis
 - C. Inability to swallow amniotic fluid
 - D. Bilateral ureter obstruction
- 3. What is the primary cause of edema in Membranous nephropathy?**
 - A. High blood pressure
 - B. Hypoalbuminemia
 - C. Excess protein intake
 - D. Dehydration
- 4. What is the primary function of the Transporter Associated with Antigen Processing (TAP)?**
 - A. Transport of lipids into the cell
 - B. Shuttling antigenic peptides into the endoplasmic reticulum
 - C. Facilitating glucose transport across the membrane
 - D. Regulating protein synthesis
- 5. What happens during recombination involving the SRY gene?**
 - A. The SRY gene is deleted from the Y chromosome
 - B. The SRY gene is duplicated on the Y chromosome
 - C. The SRY gene becomes part of the X chromosome
 - D. The SRY gene does not change during recombination
- 6. Hydrochlorothiazide (HCTZ) acts primarily on which part of the nephron?**
 - A. Proximal convoluted tubule
 - B. Distal convoluted tubule
 - C. Loop of Henle
 - D. Collecting duct

- 7. What is the mechanism of action of praziquantel?**
- A. It inhibits ATP production in parasites
 - B. It increases membrane permeability to calcium
 - C. It blocks glucose uptake in helminths
 - D. It paralyzes worms by inhibiting acetylcholine receptors
- 8. Which syndrome is characterized by progressive neurodegeneration, albinism, and recurrent pyogenic infections?**
- A. Chediak-Higashi syndrome
 - B. Wiskott-Aldrich syndrome
 - C. Chronic granulomatous disease
 - D. Hyper-IgM syndrome
- 9. What is a key feature of the first pharyngeal arch development?**
- A. Formation of the thyroid gland
 - B. Maxilla and zygomatic bone formation
 - C. Development of the larynx
 - D. Ear ossicle formation
- 10. What type of study follows a group over time to observe outcomes?**
- A. Case-control study
 - B. Cross-sectional study
 - C. Cohort study
 - D. Randomized clinical trial

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. What is the approximate half-life of factor II (prothrombin)?

- A. 60 hours**
- B. 24 hours
- C. 12 hours
- D. 36 hours

The half-life of factor II, also known as prothrombin, is approximately 60 hours. This extended half-life is significant because prothrombin is a key component in the clotting cascade, and its longevity in circulation allows for more stable hemostasis and efficient formation of thrombin, which subsequently converts fibrinogen to fibrin, necessary for blood clot formation. Additionally, factors in the coagulation cascade generally have varying half-lives, influenced by factors such as synthesis rate in the liver, vitamin K availability, and overall physiological conditions. Prothrombin's relative stability at around 60 hours ensures that the clotting process can be sustained without the need for rapid turnover, which is essential in maintaining balance in coagulation and preventing excessive bleeding or thrombosis. In contrast, other factors in the coagulation process have shorter half-lives. For instance, factors VII and X are known to have shorter half-lives, which illustrates the distinct role and efficiency of prothrombin in the coagulation pathway. Understanding the half-life of various clotting factors is crucial in clinical settings, especially for managing conditions involving coagulation disorders or monitoring anticoagulation therapy.

2. What is a potential cause of polyhydramnios?

- A. Placental insufficiency
- B. Fetal renal agenesis
- C. Inability to swallow amniotic fluid**
- D. Bilateral ureter obstruction

Polyhydramnios, which is an excessive accumulation of amniotic fluid, can arise from various etiological factors. One significant cause is the inability of the fetus to swallow amniotic fluid, which typically occurs due to gastrointestinal tract anomalies. The developing fetus swallows amniotic fluid, and this process is essential in regulating the volume of fluid within the amniotic sac. Conditions such as esophageal atresia, where the esophagus does not develop normally, can prevent the fetus from swallowing effectively, thus leading to an increase in amniotic fluid levels. In contrast, while other conditions like bilateral ureter obstruction can lead to oligohydramnios (insufficient amniotic fluid) due to reduced urine output, they do not contribute directly to polyhydramnios. Likewise, placental insufficiency typically results in reduced amniotic fluid, and fetal renal agenesis may initially cause oligohydramnios as well due to the lack of urine production. Therefore, the inability of the fetus to swallow amniotic fluid clearly correlates with the development of polyhydramnios.

3. What is the primary cause of edema in Membranous nephropathy?

- A. High blood pressure
- B. Hypoalbuminemia**
- C. Excess protein intake
- D. Dehydration

In membranous nephropathy, the primary cause of edema is hypoalbuminemia. This condition leads to decreased levels of albumin in the bloodstream. Albumin is a key protein that helps maintain oncotic pressure, which is crucial for keeping fluid within the blood vessels. When albumin levels drop, as seen in nephrotic syndrome associated with membranous nephropathy, the oncotic pressure decreases, allowing fluid to escape from the vascular compartment into the interstitial tissues, resulting in edema. This fluid shift not only causes swelling in various parts of the body but also contributes to other complications, such as increased susceptibility to infections and thrombosis. Therefore, the presence of low serum albumin levels directly correlates with the development of edema in patients suffering from membranous nephropathy.

4. What is the primary function of the Transporter Associated with Antigen Processing (TAP)?

- A. Transport of lipids into the cell
- B. Shuttling antigenic peptides into the endoplasmic reticulum**
- C. Facilitating glucose transport across the membrane
- D. Regulating protein synthesis

The primary function of the Transporter Associated with Antigen Processing (TAP) is to shuttle antigenic peptides into the endoplasmic reticulum (ER). TAP plays a crucial role in the immune response, particularly in the presentation of intracellular antigens to CD8+ T cells. Once proteins are degraded by the proteasome into smaller peptides, TAP transports these peptides from the cytosol into the lumen of the ER. In the ER, these peptides can then be loaded onto Major Histocompatibility Complex (MHC) class I molecules. This process is essential for the immune system to recognize and respond to infected or malignant cells, as it allows T cells to monitor the internal health of cells by examining the peptides presented on MHC class I molecules. The other options do not relate to the function of TAP. The transport of lipids, glucose, or the regulation of protein synthesis involves different mechanisms and protein complexes that are not the focus of TAP's role in antigen processing.

5. What happens during recombination involving the SRY gene?

- A. The SRY gene is deleted from the Y chromosome
- B. The SRY gene is duplicated on the Y chromosome
- C. The SRY gene becomes part of the X chromosome**
- D. The SRY gene does not change during recombination

During recombination involving the SRY gene, the process of crossing over can lead to the SRY gene becoming incorporated into the X chromosome instead of residing exclusively on the Y chromosome. Typically, the SRY gene, which is essential for male sex determination, is located on the Y chromosome, and its expression directs the development of male gonads. However, due to genetic recombination during meiosis, there can be exchanges of genetic material between the X and Y chromosomes. In certain cases, if a segment containing the SRY gene is transferred to the X chromosome, this can result in the presence of the SRY gene in an XX individual, potentially leading to conditions such as androgen insensitivity syndrome or sex reversal, where individuals may develop male characteristics despite having two X chromosomes. This unique aspect of sex chromosome biology highlights the complexities of genetic inheritance and the implications of recombination events.

6. Hydrochlorothiazide (HCTZ) acts primarily on which part of the nephron?

- A. Proximal convoluted tubule
- B. Distal convoluted tubule**
- C. Loop of Henle
- D. Collecting duct

Hydrochlorothiazide (HCTZ) primarily acts on the distal convoluted tubule of the nephron. This specific site is where thiazide diuretics exert their pharmacological effects by inhibiting the sodium-chloride symporter. By blocking this transporter, HCTZ decreases sodium reabsorption, leading to increased urinary excretion of sodium and water, which results in diuresis. The action of HCTZ on this segment of the nephron is significant because it contributes to its primary use in treating conditions such as hypertension and edema. In contrast to other nephron segments, such as the proximal convoluted tubule, loop of Henle, and collecting duct, thiazide diuretics are uniquely effective at this distal location, making them an essential component in the management of fluid balance and blood pressure regulation.

7. What is the mechanism of action of praziquantel?

- A. It inhibits ATP production in parasites
- B. It increases membrane permeability to calcium**
- C. It blocks glucose uptake in helminths
- D. It paralyzes worms by inhibiting acetylcholine receptors

Praziquantel's mechanism of action is primarily linked to its ability to increase the permeability of the parasitic membranes to calcium ions. This influx of calcium results in severe contractions and paralysis of the worms, making them unable to maintain their position in the host, which facilitates their removal from the body. By altering the calcium flux, praziquantel disrupts the integrity of the parasite's tegument, exposing it to the host immune system and allowing for further clearance. The action of praziquantel is particularly effective against various types of trematodes (flukes) and cestodes (tapeworms), making it a cornerstone in the treatment of schistosomiasis and other parasitic infections. This unique mechanism is what sets praziquantel apart from other antiparasitic agents, ensuring its specific targeting and effectiveness in treating infections caused by these parasites.

8. Which syndrome is characterized by progressive neurodegeneration, albinism, and recurrent pyogenic infections?

- A. Chediak-Higashi syndrome**
- B. Wiskott-Aldrich syndrome
- C. Chronic granulomatous disease
- D. Hyper-IgM syndrome

Chediak-Higashi syndrome is characterized by a triad of symptoms: progressive neurodegeneration, partial oculocutaneous albinism, and recurrent pyogenic infections. This rare genetic disorder arises from mutations in the LYST gene, which affects lysosomal trafficking and leads to abnormal function of immune cells, specifically affecting their ability to kill bacteria. As a result, individuals often experience an increased susceptibility to infections. The progressive neurodegeneration seen in Chediak-Higashi syndrome presents as developmental delay and neurological deterioration over time, while the albinism results from impaired melanin production due to dysfunctional melanocytes. Recurrent pyogenic infections are linked to the impaired immune response, manifesting as frequent bacterial infections, particularly from encapsulated organisms. This syndrome's presentation aligns with the features described in the question, making it the correct choice. Other conditions listed, while they have notable features, do not combine all three symptoms of neurodegeneration, albinism, and recurrent infections in the same way.

9. What is a key feature of the first pharyngeal arch development?

- A. Formation of the thyroid gland
- B. Maxilla and zygomatic bone formation**
- C. Development of the larynx
- D. Ear ossicle formation

The first pharyngeal arch, also known as the mandibular arch, is primarily responsible for the development of structures associated with the lower jaw and parts of the face. A key feature of its development includes the formation of the maxilla and zygomatic bone, which are essential components of the facial skeleton. During embryonic development, the first pharyngeal arch gives rise to skeletal elements, muscles, and nerves that contribute significantly to the formation of the upper and lower jaws, including the maxilla, which forms the upper jaw, and the zygomatic bone, which contributes to the cheek region. This arch also contains Meckel's cartilage, which is important in forming the mandible and serves as a temporary scaffold during the development of the definitive bones. The presence of these structures derived from the first pharyngeal arch is a hallmark of its contributions to facial development in the embryo.

10. What type of study follows a group over time to observe outcomes?

- A. Case-control study
- B. Cross-sectional study
- C. Cohort study**
- D. Randomized clinical trial

A cohort study is specifically designed to follow a group of individuals over a period of time to observe specific outcomes. In this type of study, participants are selected based on their exposure status to a particular risk factor or intervention, and researchers track them to see how the exposure impacts the development of outcomes, such as diseases or health conditions. This longitudinal approach allows for the measurement of incidence rates and the establishment of temporal relationships between exposure and outcomes. Cohort studies can be prospective, where participants are followed into the future from the point of exposure, or retrospective, where past exposures are identified and outcomes are assessed from existing data. This study design is particularly valuable for examining risk factors and the natural history of diseases, offering insights into associations that can inform clinical practice and public health initiatives. In contrast, other study types, such as case-control studies and cross-sectional studies, do not involve following a group over time to assess outcomes, which is a defining feature of cohort studies. Randomized clinical trials, while also longitudinal, differ in that they involve the random assignment of participants to different interventions, rather than observing naturally occurring exposures over time.

SAMPLE

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://nbmeform25.examzify.com>

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

SAMPLE