

MANOR PREBOARDS MODULE 1 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. The thyroid region is primarily supplied by a major branch of which artery?**
 - A. Internal carotid artery
 - B. External carotid artery
 - C. Vertebral artery
 - D. Common hepatic artery

- 2. Which enzyme is primarily responsible for fat digestion in the small intestine?**
 - A. Pancreatic Amylase
 - B. Pancreatic Lipase
 - C. Pepsin
 - D. Trypsin

- 3. The point around the nucleus where the electron probability is zero is called a**
 - A. Cloud
 - B. Node
 - C. Orbital
 - D. Axis

- 4. The brain structure that produces cerebrospinal fluid is the?**
 - A. Pineal gland
 - B. Choroid plexus
 - C. Hippocampus
 - D. Thalamus

- 5. In an electrocardiogram, what does the P wave represent?**
 - A. Ventricular repolarization
 - B. Atrial repolarization
 - C. Atrial depolarization
 - D. Ventricular depolarization

- 6. Pangamic acid is also known as which vitamin form?**
- A. Vitamin B3
 - B. Vitamin B6
 - C. Vitamin B9
 - D. Vitamin B15
- 7. Which epithelial tissue type is most common in the alveolar sacs of the lungs?**
- A. Simple cuboidal epithelium
 - B. Pseudostratified columnar epithelium
 - C. Stratified squamous epithelium
 - D. Simple squamous epithelium
- 8. In flame tests, the ammonium ion yields which color?**
- A. Yellow
 - B. Violet
 - C. Green
 - D. No color
- 9. In the nephron, which segment is largely impermeable to water and actively reabsorbs ions?**
- A. Proximal tubule
 - B. Thick ascending limb of the loop of Henle
 - C. Collecting duct
 - D. Distal convoluted tubule
- 10. Inadequate oxygen tension in air, e.g., at high altitude, is known as which condition?**
- A. Histotoxic
 - B. Anemic
 - C. Anoxic
 - D. Stagnant

Answers

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

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Explanations

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1. The thyroid region is primarily supplied by a major branch of which artery?

- A. Internal carotid artery
- B. External carotid artery**
- C. Vertebral artery
- D. Common hepatic artery

Blood to the thyroid comes mainly from the superior thyroid artery, which branches off the external carotid artery. The external carotid supplies many neck structures, and the superior thyroid is its primary contributor to thyroid blood flow. The internal carotid artery mainly serves the brain, the vertebral artery supplies the posterior circulation, and the common hepatic artery goes to the liver. So, the major branch involved is from the external carotid artery.

2. Which enzyme is primarily responsible for fat digestion in the small intestine?

- A. Pancreatic Amylase
- B. Pancreatic Lipase**
- C. Pepsin
- D. Trypsin

Fat digestion in the small intestine relies on an enzyme that specifically hydrolyzes triglycerides into fatty acids and monoglycerides. This role is filled by pancreatic lipase, which is released from the pancreas into the small intestine. Emulsification by bile salts creates many small fat droplets, increasing surface area so lipase can work efficiently, and a cofactor called colipase helps lipase bind to those droplets in the intestinal environment. The other enzymes listed target non-fat nutrients: pancreatic amylase breaks down carbohydrates, pepsin works in the stomach to digest proteins, and trypsin digests proteins in the small intestine after activation. So, pancreatic lipase is the primary fat-digesting enzyme in the small intestine.

3. The point around the nucleus where the electron probability is zero is called
a

- A. Cloud
- B. Node**
- C. Orbital
- D. Axis

In atomic theory, the electron's position is described by a wavefunction, and the probability of finding the electron is given by the square of that wavefunction. A node is a location where the wavefunction goes to zero, so the probability of finding the electron there is zero. These zeros can occur at specific distances from the nucleus (radial nodes) or along certain directions (angular nodes), but the overarching idea is that a node marks zero probability. A cloud describes where the electron is likely to be found (not zero probability), an orbital is the region defined by the wavefunction for a given state (again not a single zero), and an axis is just a line in space and has no direct relation to probability densities.

4. The brain structure that produces cerebrospinal fluid is the?

- A. Pineal gland
- B. Choroid plexus**
- C. Hippocampus
- D. Thalamus

Cerebrospinal fluid is produced by the choroid plexus, a network of ependymal cells with capillaries lining the brain's ventricles. These cells actively secrete CSF, which then fills the ventricular system and flows into the subarachnoid space to cushion the brain, remove waste, and help maintain chemical stability. The choroid plexus is located within the ventricles, especially the lateral, third, and fourth ventricles. The other structures have different roles: the pineal gland secretes melatonin, the hippocampus is key for memory, and the thalamus serves as a major relay center for sensory information.

5. In an electrocardiogram, what does the P wave represent?

- A. Ventricular repolarization
- B. Atrial repolarization
- C. Atrial depolarization**
- D. Ventricular depolarization

The P wave reflects atrial depolarization—the electrical activity that spreads through the atria and triggers their contraction. On the tracing, it shows up as a small, rounded upward deflection right before the larger QRS complex. After the atria depolarize, the impulse travels to the ventricles, causing ventricular depolarization, which is what the QRS complex represents. Ventricular repolarization is seen later as the T wave. Atrial repolarization does occur, but it's not seen as a separate wave because it's masked by the much larger ventricular depolarization.

6. Pangamic acid is also known as which vitamin form?

- A. Vitamin B3
- B. Vitamin B6
- C. Vitamin B9
- D. Vitamin B15**

Pangamic acid has long been identified as vitamin B15. Among the listed options, niacin is vitamin B3, pyridoxine is vitamin B6, and folic acid is vitamin B9—each a well-established B vitamin. Pangamic acid, historically labeled as B15, was once promoted as a form of a B vitamin, though it isn't recognized as an essential nutrient by modern nutrition standards. So, the form associated with pangamic acid is vitamin B15.

7. Which epithelial tissue type is most common in the alveolar sacs of the lungs?

- A. Simple cuboidal epithelium
- B. Pseudostratified columnar epithelium
- C. Stratified squamous epithelium
- D. Simple squamous epithelium**

Gas exchange in the lungs relies on a very thin barrier between the air in the alveoli and the blood in surrounding capillaries. That barrier is formed by a single layer of flat, thin epithelial cells—the simple squamous epithelium. In the alveolar sacs, this thin lining (type I pneumocytes) is ideal for rapid diffusion of oxygen and carbon dioxide. A small population of cuboidal cells (type II pneumocytes) sits among them to produce surfactant and help with repair, but they do not form the main lining. The other epithelium types wouldn't support diffusion as effectively: simple cuboidal is thicker and found in glands and kidney tubules; pseudostratified is characteristic of most conducting airways but not the delicate gas-exchange surface; stratified squamous is protective and suited to areas subject to abrasion, not the delicate alveolar walls. So the alveolar sacs are lined predominantly by simple squamous epithelium to maximize gas exchange.

8. In flame tests, the ammonium ion yields which color?

- A. Yellow
- B. Violet
- C. Green
- D. No color**

Flame tests rely on emission from energized electrons in metal ions; the color you see comes from photons released as those electrons transition between energy levels. The ammonium ion isn't a metal ion and doesn't have the type of electronic transitions that produce a bright visible color. When ammonium salts are heated, they decompose to ammonia, which is colorless in a flame. So, the ammonium ion itself yields no distinct flame color. If other colored metal ions are present in a compound, they would show their characteristic colors, but ammonium alone gives a colorless flame.

9. In the nephron, which segment is largely impermeable to water and actively reabsorbs ions?

- A. Proximal tubule
- B. Thick ascending limb of the loop of Henle**
- C. Collecting duct
- D. Distal convoluted tubule

The key idea is a segment that pumps ions but does not let water follow. The thick ascending limb accomplishes this by actively reabsorbing Na^+ , K^+ , and 2Cl^- via the Na-K-2Cl cotransporter on the luminal membrane, while the limb itself is largely impermeable to water. Water cannot move out, so the filtrate becomes dilute as ions are pulled into the interstitium, and this helps establish the medullary osmotic gradient essential for concentrating urine later on. Other segments don't fit as well. The proximal tubule reabsorbs both water and solutes together, so it's not water-impermeable. The collecting duct's water permeability depends on ADH—it's not inherently water-impermeable and becomes permeable to water only under hormonal control. The distal convoluted tubule reabsorbs NaCl , but its defining feature in this context isn't a strong, intrinsic water barrier; the prominent combination of active ion reabsorption with water impermeability is most characteristic of the thick ascending limb.

10. Inadequate oxygen tension in air, e.g., at high altitude, is known as which condition?

- A. Histotoxic
- B. Anemic
- C. Anoxic**
- D. Stagnant

The idea being tested is how oxygen availability affects oxygen delivery. At high altitude, the ambient oxygen partial pressure is reduced, so there's less oxygen available to diffuse into the blood. This describes a problem with the environment having little or no oxygen, which is captured by the term anoxic. The other conditions refer to problems after oxygen has entered the body: histotoxic means tissues can't use oxygen even if it's present, anemic means there isn't enough hemoglobin to carry oxygen, and stagnant means poor circulation prevents oxygenated blood from reaching tissues. Thus, the best match for inadequate oxygen tension in the air is anoxic.

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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://manorpreboardsmod1.examzify.com>

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

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