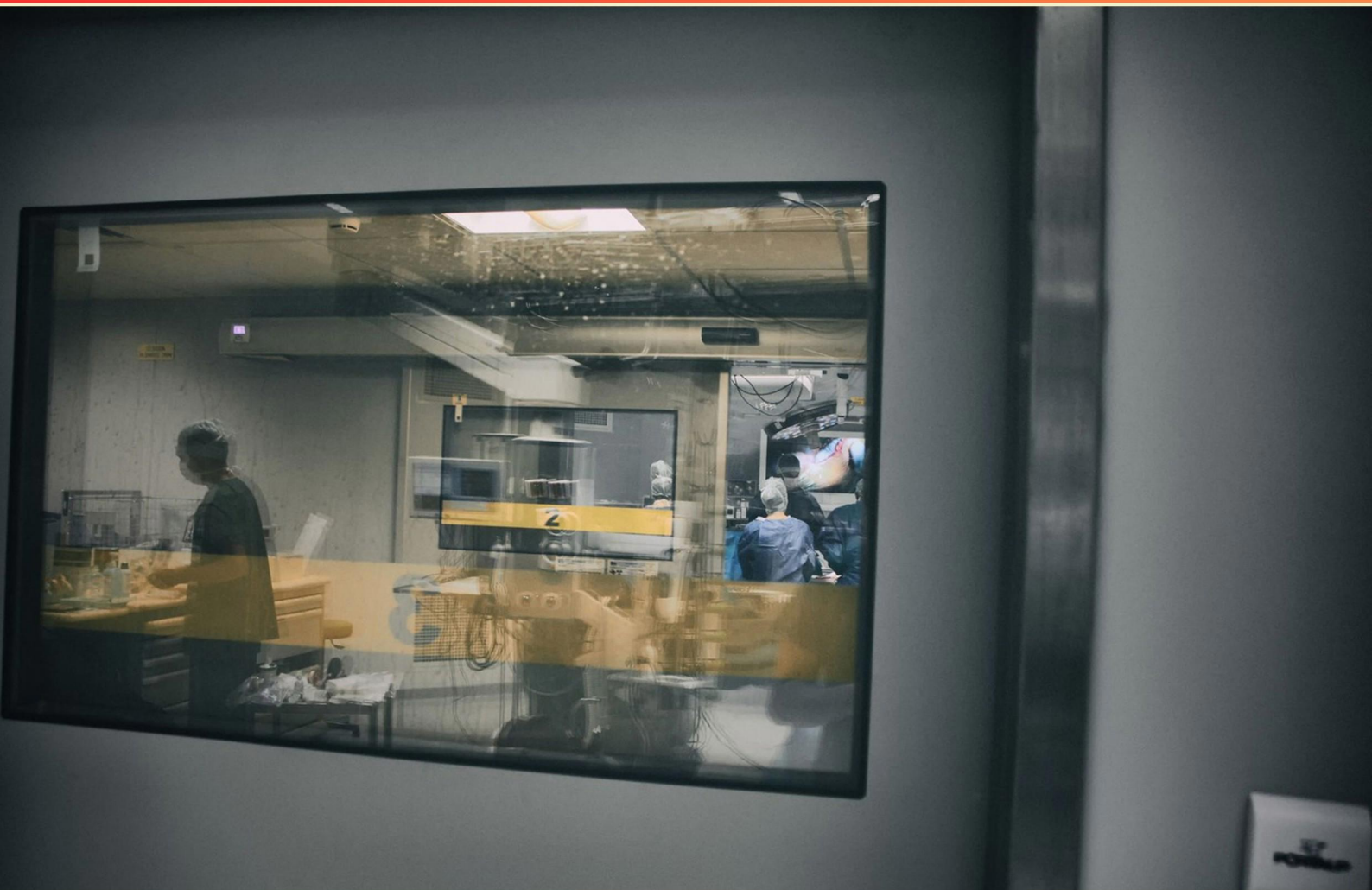


EMERGENCY MEDICINE EXAM 1 PRACTICE (SAMPLE)

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. What is the normal range for the anion gap?**
 - A. 4-10 mEq/L
 - B. 2-6 mEq/L
 - C. 15-20 mEq/L
 - D. 8-14 mEq/L
- 2. What is the medical term for stones in the urinary tract?**
 - A. Ureterolithiasis
 - B. Urolithiasis
 - C. Nephrolithiasis
 - D. Cystolithiasis
- 3. Which insect bite causes intense pruritus with burrows concentrated on web spaces, fingers, and toes?**
 - A. Bed bug bites
 - B. Lice bites
 - C. Scabies
 - D. Flea bites
- 4. HUS is often preceded by which event?**
 - A. Bloody diarrhea caused by E. coli
 - B. Viral hepatitis
 - C. Pneumonia
 - D. Urinary tract infection
- 5. Which of the following is an H or T cause of cardiac arrest?**
 - A. Hypoxia
 - B. Myocardial infarction
 - C. Hyperthermia
 - D. Hyperglycemia
- 6. Which option is NOT a red flag for cancer in back pain?**
 - A. Over 50 years old
 - B. Unexplained weight loss
 - C. Prior history of cancer
 - D. Fever

- 7. What is the general local reaction to bites and stings?**
- A. Pain only
 - B. Erythema and edema only
 - C. Pain, Erythema, Edema, Pruritus
 - D. Nausea and vomiting
- 8. If alkalosis occurs with lower temperature and CO₂, what shift on the O₂ affinity curve occurs?**
- A. Right shift
 - B. No shift
 - C. Left shift
 - D. Inverted shift
- 9. Which medication is a cornerstone in treating myxedema coma?**
- A. Levothyroxine PO
 - B. IV levothyroxine
 - C. Methimazole
 - D. Hydrocortisone only
- 10. For anesthesia of a facial region during laceration repair, which technique is described as appropriate?**
- A. Topical Anesthesia
 - B. Infiltration
 - C. Nerve Block
 - D. Intravenous Sedation

Answers

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

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Explanations

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1. What is the normal range for the anion gap?

- A. 4-10 mEq/L
- B. 2-6 mEq/L
- C. 15-20 mEq/L
- D. 8-14 mEq/L**

Anion gap reflects unmeasured anions and is calculated as Na minus (Cl plus HCO_3). In many laboratories and exams, a normal value is about 8–12 mEq/L, with a range often cited up to about 14 mEq/L to accommodate variation between labs. Among the options given, 8–14 mEq/L sits closest to the commonly accepted normal range. Why this range matters: if the gap is elevated, there are extra unmeasured acids in the blood (like lactate, ketones, or toxins) contributing to metabolic acidosis. If the gap stays normal but a metabolic acidosis is present, it's typically a hyperchloremic type where chloride rises to balance bicarbonate. Albumin levels also affect the gap—low albumin lowers the gap, high albumin can raise it. The other ranges are not consistent with standard normal values: a range around 4–10 would be relatively low, 2–6 too low, and 15–20 would be considered elevated, suggesting abnormal metabolism.

2. What is the medical term for stones in the urinary tract?

- A. Ureterolithiasis
- B. Urolithiasis**
- C. Nephrolithiasis
- D. Cystolithiasis

The main concept is recognizing the umbrella term for stones that can occur anywhere along the urinary tract. Urolithiasis refers to stones in the urinary tract as a whole, derived from lith- meaning stone and -iasis indicating a condition. It's the broad term used when discussing stones that can form in the kidney, ureter, or bladder. If a stone is located specifically in the kidney, the term nephrolithiasis is used. If it's in the ureter, it's ureterolithiasis. If it's in the bladder, cystolithiasis. So urolithiasis is the general category, while the other terms pinpoint the exact location.

3. Which insect bite causes intense pruritus with burrows concentrated on web spaces, fingers, and toes?

- A. Bed bug bites
- B. Lice bites
- C. Scabies**
- D. Flea bites

Burrows in the web spaces between the fingers and toes with intense itching is classic for scabies. The itching, often worst at night, comes from a hypersensitivity reaction to the mites, eggs, and feces that live in the superficial skin. The burrows themselves are thin, serpiginous tracks in the stratum corneum and are most evident in interdigital areas, wrists, and other flexural sites. This combination—severe nocturnal itching plus characteristic burrows in the web spaces—distinguishes scabies from other insect bites: bed bug bites tend to affect exposed skin and lack burrows; lice bites are associated with hair-bearing regions and nits; flea bites commonly cluster on the legs. Therefore, scabies is the most likely diagnosis. Treatment involves topical scabicides (like permethrin 5%) or oral ivermectin for the patient and close contacts, along with thorough cleaning of clothing, bedding, and environment.

4. HUS is often preceded by which event?

A. Bloody diarrhea caused by E. coli

B. Viral hepatitis

C. Pneumonia

D. Urinary tract infection

The key concept is that classic HUS almost always follows a diarrheal illness caused by Shiga toxin-producing E. coli. After ingesting the toxin-producing strain (often from undercooked meat or contaminated foods), a child typically develops bloody diarrhea. The Shiga toxin injures the vascular endothelium, especially in the kidneys, leading to microangiopathic hemolytic anemia, thrombocytopenia, and acute kidney injury. This makes bloody diarrhea caused by E. coli the best antecedent for HUS. The other events listed are not the usual triggers for classic HUS.

5. Which of the following is an H or T cause of cardiac arrest?

A. Hypoxia

B. Myocardial infarction

C. Hyperthermia

D. Hyperglycemia

In cardiac arrest, reversible causes are grouped as H and T to guide rapid assessment and treatment during resuscitation. Hypoxia is the best answer because inadequate oxygen delivery to the heart and brain cripples electrical activity and pump function. Without sufficient oxygen, the myocardium cannot sustain contractions, so securing airway and ventilation to restore oxygenation is a foundation of resuscitation and can directly reverse the arrest. While myocardial infarction can trigger an arrest, it is not one of the H or T reversals themselves, and hyperthermia is not part of the standard H/T list (hypothermia is). Hyperglycemia isn't a defined H/T reversible cause in this context either.

6. Which option is NOT a red flag for cancer in back pain?

A. Over 50 years old

B. Unexplained weight loss

C. Prior history of cancer

D. Fever

The key idea is differentiating red flags that suggest cancer from those that point to other serious causes. Cancer-related back pain is typically flagged by age over 50, unexplained weight loss, and a prior history of cancer, all of which raise suspicion for malignancy or metastatic disease. Fever, while important in evaluating back pain, more strongly signals infection (such as discitis or osteomyelitis) rather than cancer. So fever by itself isn't a cancer-specific red flag. If fever is present, you should evaluate for infectious processes, but it does not inherently indicate cancer as the underlying cause.

7. What is the general local reaction to bites and stings?

- A. Pain only
- B. Erythema and edema only
- C. Pain, Erythema, Edema, Pruritus**
- D. Nausea and vomiting

Local reactions to bites and stings are driven by inflammatory mediators at the site, producing a set of skin signs. Pain comes from tissue irritation and venom components; erythema from vasodilation; edema from increased vascular permeability letting fluid into the tissue; and pruritus from histamine and other mediators. Nausea and vomiting aren't typical of a local reaction and would suggest systemic involvement or another issue. So the common local reaction includes pain, redness, swelling, and itching.

8. If alkalosis occurs with lower temperature and CO₂, what shift on the O₂ affinity curve occurs?

- A. Right shift
- B. No shift
- C. Left shift**
- D. Inverted shift

Oxygen binding to hemoglobin rises and falls with pH, CO₂, and temperature. Alkalosis raises the pH, and when CO₂ is low and the temperature is cooler, each of these factors increases hemoglobin's affinity for oxygen. This tightens binding and shifts the dissociation curve to the left, meaning a lower p₅₀ and more O₂ bound at the same P_{O2}. In practical terms, loading of O₂ in the lungs is favored under these conditions. The opposite shifts occur with higher CO₂, lower pH (acidosis), or higher temperature, which move the curve to the right and promote easier O₂ release to tissues.

9. Which medication is a cornerstone in treating myxedema coma?

- A. Levothyroxine PO
- B. IV levothyroxine**
- C. Methimazole
- D. Hydrocortisone only

In myxedema coma, the priority is rapid, reliable thyroid hormone replacement because the patient is critically hypothyroid and may not tolerate or absorb oral meds. Intravenous levothyroxine provides predictable bioavailability and acts quickly, which is essential in this emergency setting. Oral levothyroxine is unreliable when a patient is comatose or has ileus or poor GI absorption, so it's not the best choice here. Dosing often starts with a IV loading amount around 200–400 mcg, followed by about 1.6 mcg/kg/day IV, with adjustments based on clinical response and labs. Some protocols also consider adding IV liothyronine (T₃) for faster effect, but the foundation remains IV levothyroxine. Hydrocortisone is given empirically if adrenal insufficiency cannot be ruled out, but it is not a standalone treatment and does not replace thyroid hormone. Methimazole would address hyperthyroidism, not hypothyroidism, so it's not appropriate in this context.

10. For anesthesia of a facial region during laceration repair, which technique is described as appropriate?

- A. Topical Anesthesia
- B. Infiltration
- C. Nerve Block**
- D. Intravenous Sedation

Regional nerve blockade is the best choice for facial laceration repair because the face's sensation comes from branches of the trigeminal nerve, and numbing a nerve trunk can cover a large facial area with just a few injections. A nerve block places local anesthetic near the targeted nerve (for example, infraorbital, mental, or supraorbital nerves), providing reliable, broad anesthesia of the wound and surrounding tissues with less need for multiple injections. Infiltration at the wound edge can numb only the immediate tissue and may miss deeper branches, requiring many injections and causing more tissue distortion. Topical anesthesia is often insufficient for most facial lacerations, and intravenous sedation does not anesthetize the tissue itself. So using a nerve block gives the most consistent and efficient anesthesia for facial laceration repair.

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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://emergencymed1.examzify.com>

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

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