

# Membership of the Royal Colleges of Surgeons (MRCS) Practice Exam (Sample)

## Study Guide



**Everything you need from our exam experts!**

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**SAMPLE**

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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

- 1. What type of acid-base disturbance is associated with high-output ureterosigmoidostomy?**
  - A. Metabolic alkalosis**
  - B. Respiratory acidosis**
  - C. Metabolic acidosis**
  - D. Respiratory alkalosis**
  
- 2. Which of the following conditions is treated with radical cystectomy?**
  - A. Stage 0 bladder cancer**
  - B. Stage I bladder cancer**
  - C. Stage II or greater bladder cancer**
  - D. Bladder infection**
  
- 3. How can the percentage of total body surface area (TBSA) burned be estimated?**
  - A. By clinical experience alone**
  - B. Using the Lund Browder chart or Rule of nines**
  - C. By patient's age and weight**
  - D. Calculating fluid resuscitation needs**
  
- 4. Which nerve is primarily associated with winging of the scapula?**
  - A. Thoracodorsal nerve**
  - B. Long thoracic nerve of Bell**
  - C. Serratus nerve**
  - D. Medial pectoral nerve**
  
- 5. Which arteries supply the adrenal glands?**
  - A. Renal arteries**
  - B. Middle adrenal arteries from the aorta**
  - C. A and B**
  - D. Inferior phrenic arteries**

- 6. Which is a potential cause of diarrhea in Crohn's disease?**
- A. Excess bile salts due to ileal resection**
  - B. Intestinal hypermotility**
  - C. Allergy to gluten**
  - D. Viral infection of the intestines**
- 7. What term is used to describe depressed skull fractures?**
- A. Signature fractures**
  - B. Linear fractures**
  - C. Comminuted fractures**
  - D. Basilar fractures**
- 8. Which sign is indicative of acute cholecystitis, characterized by hyperesthesia below the right scapula?**
- A. Boas sign**
  - B. Psoas stretch sign**
  - C. McBurney's point**
  - D. Shifting dullness**
- 9. Which classification system is used to determine the severity of diverticulitis?**
- A. Marchetti classification**
  - B. Hinchey classification**
  - C. Clavien-Dindo classification**
  - D. Bismuth classification**
- 10. What is the primary indication for creating a mucous fistula?**
- A. To decrease intestinal motility**
  - B. To decompress a distal segment of bowel**
  - C. To facilitate nutrient absorption**
  - D. To correct dehydration**



## **Answers**

SAMPLE

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

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## **Explanations**

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**1. What type of acid-base disturbance is associated with high-output uretosigmoidostomy?**

- A. Metabolic alkalosis**
- B. Respiratory acidosis**
- C. Metabolic acidosis**
- D. Respiratory alkalosis**

High-output uretosigmoidostomy can lead to metabolic acidosis due to the loss of bicarbonate-rich urine through the sigmoid colon. When the kidneys no longer have a normal route for excretion, urination occurs through the gut, resulting in a unique situation where bicarbonate is lost along with urinary solutes. In this scenario, large volumes of urine that are high in urea and electrolytes pass directly into the gastrointestinal tract. The colonic absorption of these solutes can lead to a deficit of bicarbonate, thereby creating a state of metabolic acidosis. Additionally, patients with this condition often experience diarrhea, which can further contribute to bicarbonate loss and exacerbate the acidosis. This helps explain the connection between high-output uretosigmoidostomy and the development of metabolic acidosis, as the kidney's typical mechanism for maintaining acid-base balance is disrupted.

**2. Which of the following conditions is treated with radical cystectomy?**

- A. Stage 0 bladder cancer**
- B. Stage I bladder cancer**
- C. Stage II or greater bladder cancer**
- D. Bladder infection**

Radical cystectomy is a surgical procedure that involves the complete removal of the bladder along with surrounding tissues and lymph nodes. This procedure is typically indicated for bladder cancer that is muscular invasive, which refers to conditions classified as stage II and above. In stage II bladder cancer, the cancer has invaded the muscular layer of the bladder wall but has not spread to nearby organs. As the stage of cancer increases, the aggressiveness and potential for metastasis also increase, warranting more aggressive treatment strategies such as radical cystectomy. For earlier stages, such as stage 0 or stage I, treatment options generally involve bladder-preserving therapies, such as transurethral resection of bladder tumor (TURBT) and intravesical therapy, since the cancer is not invasive at that point. Similarly, bladder infections do not require such invasive surgical interventions but are typically managed with antibiotics and other conservative treatments. Thus, radical cystectomy is most appropriate for stage II or greater bladder cancer to reduce the risk of disease progression and improve survival outcomes.

**3. How can the percentage of total body surface area (TBSA) burned be estimated?**

- A. By clinical experience alone
- B. Using the Lund Browder chart or Rule of nines**
- C. By patient's age and weight
- D. Calculating fluid resuscitation needs

The percentage of total body surface area (TBSA) burned can be accurately estimated using established methods such as the Lund Browder chart or the Rule of Nines. These tools provide systematic ways to evaluate and quantify the extent of burns across the body. The Rule of Nines is a straightforward method that divides the body into sections, each representing approximately 9% (or multiples of 9%) of the total body surface area. For example, in adults, the head and neck are 9%, each arm is 9%, the anterior and posterior torso accounts for 18% each, and each leg constitutes 18%. This method is particularly useful for rapid assessments in emergency situations. The Lund Browder chart, on the other hand, offers a more nuanced approach by taking into account variations in body proportions, especially in children. This chart considers the age of the patient and adjusts the percentage calculations accordingly, leading to more accurate assessments in pediatric cases. Both of these methods are preferred over relying solely on clinical experience or estimations based on a patient's age and weight since they are based on established anatomical knowledge and are typically more uniform across various patient populations. Calculating fluid resuscitation needs is a critical aspect of burn treatment but is secondary to accurately assessing

**4. Which nerve is primarily associated with winging of the scapula?**

- A. Thoracodorsal nerve
- B. Long thoracic nerve of Bell**
- C. Serratus nerve
- D. Medial pectoral nerve

The long thoracic nerve of Bell is primarily associated with winging of the scapula because it innervates the serratus anterior muscle. This muscle plays a crucial role in stabilizing the scapula against the thoracic wall during arm movements. When the long thoracic nerve is injured or compromised, the serratus anterior cannot function properly, leading to winging of the scapula, where the medial border of the scapula protrudes away from the thorax. Winging can often be observed during pushing movements or when the patient attempts to raise their arms. The pathology arises from the inability of the serratus anterior to hold the scapula flat against the chest wall, which is why the long thoracic nerve is directly linked to this particular condition. Understanding the anatomy and function of the nerves and muscles involved helps to clearly illustrate the mechanisms behind winging of the scapula.

## 5. Which arteries supply the adrenal glands?

- A. Renal arteries
- B. Middle adrenal arteries from the aorta
- C. A and B**
- D. Inferior phrenic arteries

The adrenal glands receive blood supply from multiple arteries, making the correct choice a comprehensive one. The middle adrenal arteries, which originate directly from the abdominal aorta, specifically supply the adrenal glands, ensuring a direct and robust blood supply. In addition to these arteries, the inferior phrenic arteries also contribute to the blood supply of the adrenal glands, particularly providing branches that help support the superior aspects of the glands. Furthermore, although the renal arteries predominantly supply the kidneys, they can also give rise to small branches that may indirectly assist in vascularizing the adrenal glands, especially concerning their lower portions. This multi-faceted arterial supply underlines the significance of having multiple sources feeding the adrenal glands, which is critical for their function in hormone production and regulation. Understanding these connections is vital for clinical considerations, especially in conditions that may affect adrenal function or during surgical interventions related to these glands.

## 6. Which is a potential cause of diarrhea in Crohn's disease?

- A. Excess bile salts due to ileal resection**
- B. Intestinal hypermotility
- C. Allergy to gluten
- D. Viral infection of the intestines

In Crohn's disease, particularly when the ileum is affected or surgically resected, one of the potential causes of diarrhea is excess bile salts. The ileum is responsible for the reabsorption of bile salts, which are critical for the digestion and absorption of fats. When a section of the ileum is removed or severely damaged, the body may not be able to reabsorb these bile salts effectively. As a result, the unabsorbed bile salts can enter the colon. In the colon, they can attract water and lead to increased osmotic diarrhea. This condition, known as bile acid malabsorption, is a common consequence after ileal resection and contributes significantly to diarrhea in patients with Crohn's disease. The presence of bile salts in the colon can also stimulate increased intestinal secretion and motility, which compounds the problem. While intestinal hypermotility can also be a factor in diarrhea, it is more commonly a symptom resulting from various pathological processes rather than a direct cause. Other options, such as allergies to gluten and viral infections, are less relevant to Crohn's disease specifically and are not typically considered primary causes of diarrhea in this context.

**7. What term is used to describe depressed skull fractures?**

- A. Signature fractures**
- B. Linear fractures**
- C. Comminuted fractures**
- D. Basilar fractures**

The term "signature fractures" refers specifically to depressed skull fractures that have a distinctive pattern, often associated with certain types of cranial trauma. These fractures occur when an object strikes the skull with enough force to indent the bone, creating a depression that can sometimes represent the shape of the object that caused the injury. Signature fractures are significant because they can indicate the nature of the impact and provide insights into the circumstances surrounding the trauma. The other terms do not accurately describe depressed skull fractures. Linear fractures typically describe fractures that are cracks in the skull without displacement. Comminuted fractures refer to fractures that are broken into several pieces rather than being simply depressed. Basilar fractures occur at the base of the skull and often involve different mechanisms and implications than depressed fractures. Understanding these distinctions is critical for diagnosis and management in traumatic head injuries.

**8. Which sign is indicative of acute cholecystitis, characterized by hyperesthesia below the right scapula?**

- A. Boas sign**
- B. Psoas stretch sign**
- C. McBurney's point**
- D. Shifting dullness**

Boas sign is indeed indicative of acute cholecystitis and refers to the phenomenon of hyperesthesia (increased sensitivity to stimuli) in the area below the right scapula. This sign arises because irritation of the diaphragm due to an inflamed gallbladder can refer pain to the right shoulder region. It occurs due to the shared nerve pathways between the visceral organs and the somatic structures in that area. In the context of acute cholecystitis, the inflammation of the gallbladder can lead to irritation of the phrenic nerve, which innervates the diaphragm. When the diaphragm is irritated, it can manifest as referred pain in areas that are innervated by the same spinal cord segments, including the dermatomes of the right shoulder and the area beneath the right scapula. Other signs and tests mentioned in the options have different clinical implications. For example, the psoas stretch sign is primarily associated with appendicitis, where pain occurs upon stretching the psoas muscle. McBurney's point is another reference point for appendicitis rather than cholecystitis, while shifting dullness is a sign used to detect fluid in the abdominal cavity, commonly seen in conditions like ascites. Therefore

**9. Which classification system is used to determine the severity of diverticulitis?**

**A. Marchetti classification**

**B. Hinchey classification**

**C. Clavien-Dindo classification**

**D. Bismuth classification**

The Hinchey classification is specifically designed to assess the severity of diverticulitis by categorizing it into different stages based on clinical presentations and findings at surgery or imaging. This classification system helps in guiding treatment decisions and determining the appropriate level of surgical intervention based on the extent of the disease. The stages of the Hinchey classification range from uncomplicated diverticulitis, classified as stage 1, to more severe forms such as peritonitis associated with perforation or abscess formation in later stages. This structured approach allows healthcare providers to evaluate the condition's severity effectively and aids in communication regarding the management plan. Other classification systems listed focus on different medical conditions or areas. For instance, the Marchetti classification deals with testicular torsion, the Clavien-Dindo classification assesses surgical complications, and the Bismuth classification pertains to bile duct injuries, making them irrelevant to the specific assessment of diverticulitis.

**10. What is the primary indication for creating a mucous fistula?**

**A. To decrease intestinal motility**

**B. To decompress a distal segment of bowel**

**C. To facilitate nutrient absorption**

**D. To correct dehydration**

Creating a mucous fistula is primarily indicated to decompress a distal segment of the bowel. This procedure is often performed in situations where there is a blockage or obstruction, such as in cases of bowel disease, trauma, or malignancy. By creating a fistula, intestinal contents are diverted away from the obstructed segment, allowing for the release of pressure and preventing further complications such as bowel rupture or ischemia. This decompression helps to reduce the distention and discomfort associated with bowel obstruction and facilitates the management of the underlying condition by alleviating symptoms and preventing further physiological complications. The other options, although they may relate to broader gastrointestinal management, do not accurately reflect the primary purpose of a mucous fistula. Techniques specifically aimed at decreasing intestinal motility, facilitating nutrient absorption, or correcting dehydration are not the core objectives of creating a mucous fistula. Instead, they represent different clinical strategies for managing various gastrointestinal and metabolic conditions, highlighting the focused role of a mucous fistula in ensuring bowel health and function.



## 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](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://mrcshighyield.examzify.com>**

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