# MEDICAL COUNCIL OF CANADA QUALIFYING EXAMINATION (MCCQE) I 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.

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# 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!

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# Questions

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**1. How long after ACL reconstruction using a graft is full return to activity typically allowed?**

A. 3 months

B. 6 months

C. 9 months

D. 12 months

**2. In diabetic ketoacidosis management, why is potassium checked before starting insulin therapy?**

A. Insulin can cause potassium to shift intracellularly and worsen hypokalemia, risking arrhythmias

B. Potassium has no effect on insulin therapy

C. Potassium should be elevated to hyperkalemia before insulin

D. Potassium monitoring delays therapy unnecessarily

**3. Which statement correctly describes relative risk and odds ratio?**

A. OR is always equal to RR

B. OR approximates RR when outcomes are rare

C. RR compares odds

D. RR is used only in case-control studies

**4. A patient with type 1 diabetes presents with polyuria, vomiting, and dehydration. How would you differentiate diabetic ketoacidosis from hyperosmolar hyperglycemic state, and what is the initial management priority?**

A. DKA shows anion gap metabolic acidosis with elevated ketones and lower bicarbonate; HHS has severe hyperglycemia with minimal or no acidosis; initial management is rapid IV isotonic fluids, electrolyte correction, and insulin after potassium checked

B. DKA shows hyperosmolar state; HHS has anion gap acidosis; treat with subcutaneous insulin first

C. DKA: high bicarbonate; HHS: acidosis

D. DKA lacks ketones; HHS ketosis; treat with oral fluids

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**5. Which cluster of risk factors defines metabolic syndrome?**

A. Abdominal obesity, hypertriglyceridemia, low HDL cholesterol, hypertension, and elevated fasting glucose.

B. Elevated HDL cholesterol and low triglycerides with normal blood pressure.

C. Obesity only with elevated fasting glucose.

D. Hypertension and high LDL only.

**6. In suspected deep vein thrombosis, which test is most sensitive and used as first-line diagnostic test?**

A. Magnetic resonance venography

B. D-dimer testing

C. Compression ultrasonography

D. Venography

**7. Which primary immunodeficiency presents in male infants with recurrent sinopulmonary infections after 6 months, absence of germinal centers in nodes, low IgG, and a family history suggesting X-linked disease?**

A. Bruton's agammaglobulinemia (X-linked)

B. Severe combined immunodeficiency

C. Common variable immunodeficiency

D. IgA deficiency

**8. In suspected malaria, what is the recommended diagnostic test and initial management?**

A. Urinalysis and empiric antibiotics.

B. Peripheral blood smear or rapid diagnostic test to confirm; initiate species- and resistance-guided antimalarial therapy and supportive care.

C. CT scan to identify cerebral malaria; defer treatment.

D. Blood culture; administer antipyretics only.

**9. Which strategy minimizes NSAID-associated GI risk?**

A. Co-prescribe PPI for high-risk

B. Use the highest dose for longer

C. Stop analgesics

D. Avoid COX-2 inhibitors entirely

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**10. In a 14-year-old with delayed puberty, what are the initial evaluation steps?**

A. Refer to pediatric endocrinology.

B. Assess secondary sexual characteristics; draw FSH/LH, TSH, prolactin; consider bone age; karyotype if indicated; refer to pediatric endocrinology.

C. Immediately start testosterone therapy.

D. Wait until adulthood before evaluating.

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# Answers

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

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# Explanations

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## 1. How long after ACL reconstruction using a graft is full return to activity typically allowed?

A. 3 months

B. 6 months

C. 9 months

D. 12 months

*Rehabilitation after ACL reconstruction hinges on graft healing and restoring knee function, not just the clock. By about six months, many patients have regained near-normal range of motion, reduced swelling, and strength symmetry that allows for full activity if objective criteria are met. Clearance typically requires things like quadriceps and hamstring strength close to the opposite leg, successful functional tests (such as hop tests) with symmetry, and a stable knee without pain or effusion. Because everyone's healing varies, some individuals may be ready earlier, while others—especially those returning to high-demand pivoting sports—may need longer, sometimes eight to twelve months, to reduce re-injury risk.*

## 2. In diabetic ketoacidosis management, why is potassium checked before starting insulin therapy?

A. Insulin can cause potassium to shift intracellularly and worsen hypokalemia, risking arrhythmias

B. Potassium has no effect on insulin therapy

C. Potassium should be elevated to hyperkalemia before insulin

D. Potassium monitoring delays therapy unnecessarily

*In diabetic ketoacidosis, insulin therapy shifts potassium from the extracellular space into cells, which can cause the serum potassium to fall rapidly. At the same time, many patients have a total body potassium deficit from osmotic diuresis and vomiting, even if the initial serum level appears normal or high. Starting insulin without addressing potassium can therefore precipitate severe hypokalemia and increase the risk of life-threatening arrhythmias. That's why potassium is checked before giving insulin and corrected as needed: if potassium is very low, insulin is withheld until potassium rises to a safer level; if it's in the mid-range, insulin is started with concurrent potassium replacement to keep levels in a safer range; if potassium is high, insulin can be started with careful monitoring and planned repletion to prevent a dangerous drop. Throughout insulin therapy, potassium is monitored frequently because shifts continue as acidosis resolves and glucose is corrected.*

## 3. Which statement correctly describes relative risk and odds ratio?

A. OR is always equal to RR

B. OR approximates RR when outcomes are rare

C. RR compares odds

D. RR is used only in case-control studies

*Relative risk and odds ratio are different ways to measure the association between exposure and outcome. Relative risk compares probabilities (risk in the exposed group divided by risk in the unexposed group), while odds ratio compares odds (the ratio of the probability of the event to the probability of no event, in each group). When the outcome is rare, the probability of the event is small, so odds ≈ probability. In that case, the odds ratio closely approximates the relative risk, which is why this statement is correct. The other statements mix up what RR and OR measure and when each is used—for example, RR is not a measure of odds, and RR is not limited to case-control studies (that design often uses OR because risks cannot be directly estimated). When the outcome is common, OR can overstate the strength of association compared with RR.*

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**4. A patient with type 1 diabetes presents with polyuria, vomiting, and dehydration. How would you differentiate diabetic ketoacidosis from hyperosmolar hyperglycemic state, and what is the initial management priority?**

A. DKA shows anion gap metabolic acidosis with elevated ketones and lower bicarbonate; HHS has severe hyperglycemia with minimal or no acidosis; initial management is rapid IV isotonic fluids, electrolyte correction, and insulin after potassium checked

B. DKA shows hyperosmolar state; HHS has anion gap acidosis; treat with subcutaneous insulin first

C. DKA: high bicarbonate; HHS: acidosis

D. DKA lacks ketones; HHS ketosis; treat with oral fluids

*The key idea is that these two emergencies differ in acid–base status and ketone production, which drives both diagnosis and initial management. Diabetic ketoacidosis causes anion-gap metabolic acidosis from ketone accumulation; you'll see elevated ketones and a low bicarbonate. Hyperosmolar hyperglycemic state, on the other hand, features very high glucose with high serum osmolality but little or no ketosis and little acidosis. This distinction helps you recognize the underlying pathophysiology and guides monitoring and therapy. The priority in either scenario is immediate fluid resuscitation with isotonic saline to restore circulating volume and perfusion, correct dehydration and osmolar abnormalities, and begin electrolyte management. Potassium balance is crucial, because insulin therapy and fluid shifts can rapidly drop serum potassium; you should assess and address potassium before or during insulin administration. Insulin is typically started after confirming a safe potassium level (and only after adequate fluid resuscitation), to halt ongoing ketogenesis in DKA and to help correct hyperglycemia in both conditions.*

**5. Which cluster of risk factors defines metabolic syndrome?**

A. Abdominal obesity, hypertriglyceridemia, low HDL cholesterol, hypertension, and elevated fasting glucose.

B. Elevated HDL cholesterol and low triglycerides with normal blood pressure.

C. Obesity only with elevated fasting glucose.

D. Hypertension and high LDL only.

*Metabolic syndrome is defined by a cluster of cardiovascular and metabolic risk factors that tend to occur together, increasing the risk of diabetes and heart disease. The components include abdominal obesity, elevated triglycerides, reduced HDL cholesterol, high blood pressure, and elevated fasting glucose. A diagnosis is made when three or more of these factors are present. The cluster that lists all five factors matches this definition, making it the best representation. The other options miss one or more components or include factors not used to define the syndrome (for example, high LDL cholesterol is not part of the diagnostic set, and having only two factors like obesity and elevated fasting glucose isn't enough to meet the criterion).*

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## 6. In suspected deep vein thrombosis, which test is most sensitive and used as first-line diagnostic test?

A. Magnetic resonance venography

B. D-dimer testing

C. Compression ultrasonography

D. Venography

*When evaluating suspected deep vein thrombosis, you want a test that reliably detects clot while being practical to perform right away. Compression ultrasonography fits this best because it is noninvasive, readily available at the bedside, and highly accurate for proximal DVT (about 95% sensitivity with high specificity). This makes it the most suitable first-line imaging test to confirm or exclude DVT in most patients. D-dimer is extremely sensitive but not specific; a positive result can occur with many conditions, and a negative result only helps rule out DVT in patients with low pretest probability. Venography is invasive and rarely used as a first-line test, while MR venography, though informative, is less accessible and more costly. So compression ultrasonography provides the best balance of sensitivity, practicality, and safety for initial evaluation. If suspicion remains high despite a negative ultrasound, additional imaging or repeat testing may be considered.*

## 7. Which primary immunodeficiency presents in male infants with recurrent sinopulmonary infections after 6 months, absence of germinal centers in nodes, low IgG, and a family history suggesting X-linked disease?

A. Bruton's agammaglobulinemia (X-linked)

B. Severe combined immunodeficiency

C. Common variable immunodeficiency

D. IgA deficiency

*This scenario tests recognizing a defect in B cell development that leads to pan-hypogammaglobulinemia with absent germinal centers in lymphoid tissue. In male infants, infections starting after six months often reflect waning maternal IgG, revealing an underlying humoral deficiency. The hallmark findings are very low IgG (and usually low other immunoglobulins) and a marked reduction or absence of circulating mature B cells, which explains why germinal centers—areas in lymph nodes where B cells normally mature and class-switch—are absent. The X-linked pattern is suggested by the male-only presentation and a family history pointing to this inheritance. Bruton's agammaglobulinemia arises from a mutation in BTK, which blocks B cell development at an early stage in the bone marrow. Without mature B cells, antibody production across all classes is severely impaired, and germinal centers fail to form because they depend on B cells. This directly accounts for the recurrent sinopulmonary infections with encapsulated bacteria seen after maternal antibodies wane. Other primary immunodeficiencies don't fit as well. Severe combined immunodeficiency typically involves both T and B cell defects and presents with infections very early in life, not just after six months. Common variable immunodeficiency usually presents later in childhood or adulthood with low immunoglobulins but is not characteristically X-linked and does not feature absent germinal centers from infancy. IgA deficiency often has normal IgG levels and primarily mucosal issues, without the broad humoral deficiency or absence of germinal centers described here. Management focuses on lifelong immunoglobulin replacement and prompt treatment of infections, along with genetic counseling for X-linked inheritance.*

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**8. In suspected malaria, what is the recommended diagnostic test and initial management?**

A. Urinalysis and empiric antibiotics.

B. Peripheral blood smear or rapid diagnostic test to confirm; initiate species- and resistance-guided antimalarial therapy and supportive care.

C. CT scan to identify cerebral malaria; defer treatment.

D. Blood culture; administer antipyretics only.

*Diagnosing suspected malaria hinges on detecting parasites in the blood. A peripheral blood smear (thick for sensitivity and thin for species identification) is the traditional standard, and rapid diagnostic tests can confirm infection quickly when microscopy isn't immediately available. Once infection is confirmed, treatment should be tailored to the parasite species and local resistance patterns, paired with supportive care to address fever, dehydration, hypoglycemia, anemia, and potential complications. In severe cases, initiate parenteral antimalarial therapy promptly and manage organ dysfunction as needed. Urinalysis with empiric antibiotics misses the diagnostic confirmation and species-specific treatment; a CT scan is not a routine diagnostic tool for malaria and delaying therapy while imaging is done is not appropriate; blood culture with only antipyretics fails to treat malaria and does not confirm the diagnosis.*

**9. Which strategy minimizes NSAID-associated GI risk?**

A. Co-prescribe PPI for high-risk

B. Use the highest dose for longer

C. Stop analgesics

D. Avoid COX-2 inhibitors entirely

*NSAIDs increase gastric injury by inhibiting prostaglandins that protect the stomach lining. For patients at high GI risk, protecting the stomach with a proton pump inhibitor while continuing NSAID therapy lowers the chance of ulcers and bleeding more effectively than stopping the NSAID or simply avoiding certain drug classes. Co-prescribing a PPI provides targeted protection for those most vulnerable (e.g., prior ulcers, older age, concurrent anticoagulants or steroids) without abandoning NSAID therapy that may be needed for pain control. Using the highest dose for longer increases risk, stopping analgesics isn't practical for ongoing pain, and avoiding COX 2 inhibitors entirely isn't as protective in at-risk patients as adding gastric protection.*

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**10. In a 14-year-old with delayed puberty, what are the initial evaluation steps?**

A. Refer to pediatric endocrinology.

B. Assess secondary sexual characteristics; draw FSH/LH, TSH, prolactin; consider bone age; karyotype if indicated; refer to pediatric endocrinology.

C. Immediately start testosterone therapy.

D. Wait until adulthood before evaluating.

*Delaying puberty in a teenager is an endocrine issue that benefits from specialized assessment. The best first step is to involve pediatric endocrinology so the teen can receive a focused, systematic evaluation rather than jumping into testing or treatment without context. A pediatric endocrinologist can perform a careful history and physical exam, assess growth velocity and pubertal staging, and then decide what tests are truly needed. This approach helps distinguish constitutional delay from underlying conditions such as hypogonadism, thyroid or prolactin disorders, or gonadal/chromosomal issues, and it guides appropriate next steps like targeted laboratory testing (for example, gonadotropins, thyroid function, prolactin) and imaging or genetic testing if indicated. Initiating testosterone therapy right away is not appropriate without clarifying the cause, and waiting until adulthood would miss potentially treatable conditions and delay needed management. In short, specialized evaluation first ensures a correct diagnosis and appropriate, timely management.*

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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:

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

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