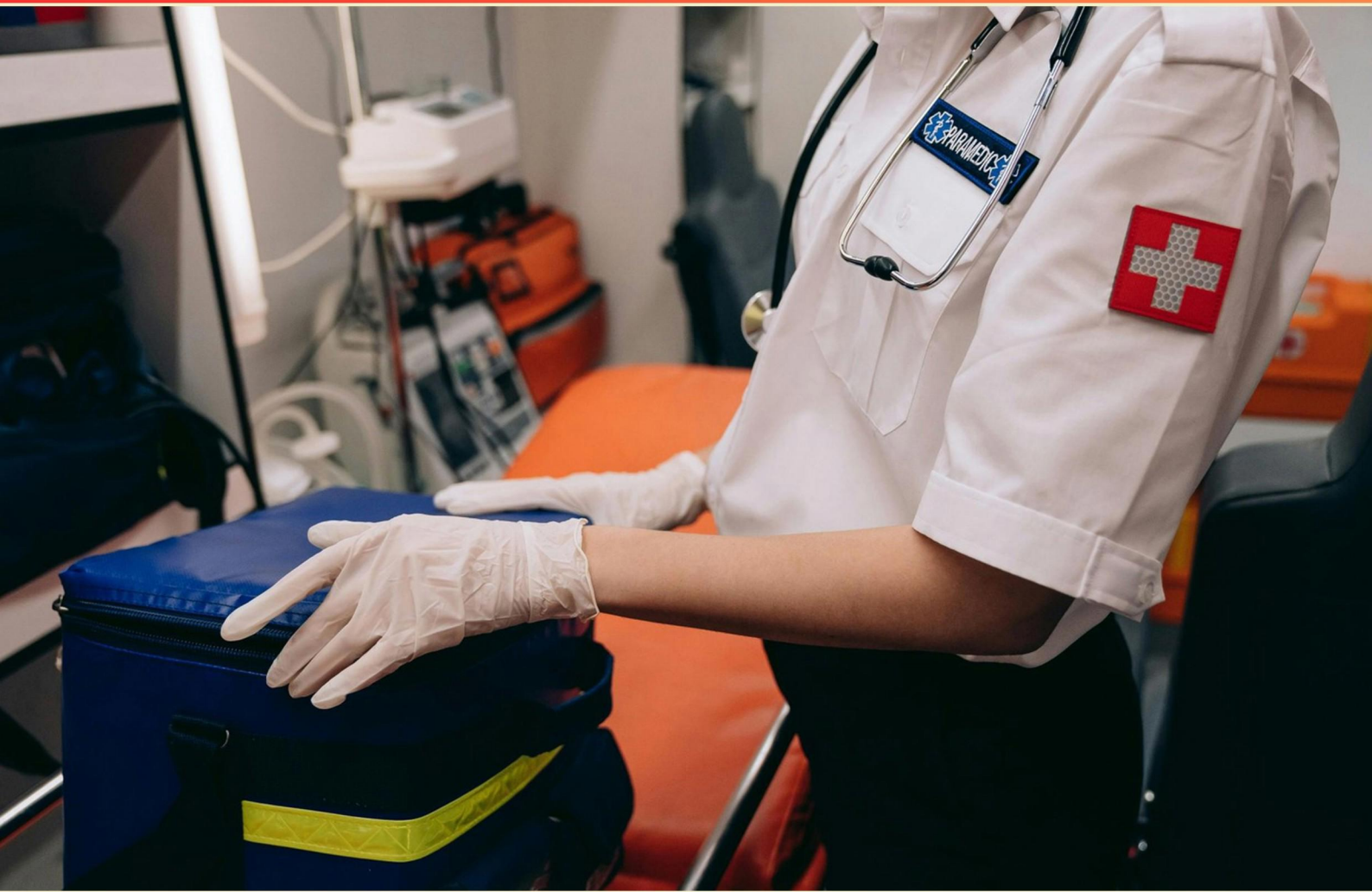


OSMT (ONTARIO SOCIETY OF MEDICAL TECHNOLOGISTS) PRACTICE EXAM (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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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 a pustule?

- A. a small flat red area of the skin
- B. a small raised area of the skin
- C. a small raised area of the skin containing clear fluid
- D. a small raised area of the skin containing cloudy fluid

2. Which statement is NOT true of muscle locations and functions?

- A. a. The deltoid is the shoulder muscle that adducts the arm
- B. b. The quadriceps femoris group is on the front of the thigh and extends the lower leg
- C. c. The triceps brachii extends the forearm: its antagonist is the biceps brachii
- D. d. The rectus abdominus is on the front of the abdomen and flexes the vertebral column

3. What is included in the central nervous system?

- A. Peripheral nerves
- B. Somatic nerves
- C. Spinal nerves
- D. Brain and spinal cord

4. When stained with a Romanowsky stain, the RBC should be:

- A. Blue
- B. Green
- C. Purple
- D. Red

5. An IgM molecule:

- A. can cross the placenta
- B. is the largest antibody
- C. is a monomer
- D. cannot fix complement

- 6. What is a common ripening agent for haematoxylin?**
- A. Sunlight
 - B. Tungsten
 - C. Iron
 - D. Haematin
- 7. Which of the following are bone cells that absorb and remove unwanted bone tissue?**
- A. fossa
 - B. osteoblast
 - C. osteoclast
 - D. exotosis
- 8. What will haematoxylin ripen into?**
- A. Haematurg
 - B. Haematein
 - C. Haematone
 - D. Cyanmethemoglobin
- 9. The classification for transporting biohazards, according to the TDG Act is:**
- A. a. 6.2
 - B. b. 1A
 - C. c. 2B
 - D. d. 5.3
- 10. What does Arrector Pilli refer to?**
- A. the elasticity of the skin
 - B. maintenance of body fluid
 - C. muscles which produce "goose bumps"
 - D. connective tissue in the epidermis

Answers

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

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Explanations

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1. What is a pustule?

- A. a small flat red area of the skin
- B. a small raised area of the skin
- C. a small raised area of the skin containing clear fluid
- D. a small raised area of the skin containing cloudy fluid**

A pustule is defined as a small, raised area of the skin that contains cloudy fluid, which usually consists of pus. This formation is commonly associated with inflammatory responses to infections or irritations, resulting in the accumulation of white blood cells, dead tissue, and other components in the fluid, giving it a cloudy appearance. The other described conditions do not match the definition of a pustule. A small flat red area of the skin refers to a macule, while a small raised area of the skin without any mention of fluid would be classified as a papule. Lastly, a small raised area of the skin containing clear fluid would describe a vesicle rather than a pustule. Thus, the definition aligns with option D, as it correctly characterizes the nature of a pustule.

2. Which statement is NOT true of muscle locations and functions?

- A. a. The deltoid is the shoulder muscle that adducts the arm**
- B. b. The quadriceps femoris group is on the front of the thigh and extends the lower leg
- C. c. The triceps brachii extends the forearm: its antagonist is the biceps brachii
- D. d. The rectus abdominus is on the front of the abdomen and flexes the vertebral column

The correct answer is based on the role of the deltoid muscle in arm movement. The deltoid is primarily responsible for abduction of the arm, particularly when the arm is raised above head level. While it may assist in adduction during certain movements, it is not accurate to categorize its primary function as adducting the arm. The other statements accurately describe the respective muscles: the quadriceps femoris indeed extends the lower leg, the triceps brachii extends the forearm with the biceps brachii as its antagonist, and the rectus abdominus flexes the vertebral column while being located on the front of the abdomen.

3. What is included in the central nervous system?

- A. Peripheral nerves
- B. Somatic nerves
- C. Spinal nerves
- D. Brain and spinal cord**

The central nervous system (CNS) is comprised of the brain and spinal cord. This is crucial as the CNS serves as the main control center for the body, responsible for processing sensory information, coordinating responses, and facilitating communication between different parts of the body. The brain functions as the major processing unit, while the spinal cord acts as a conduit for signals between the brain and the rest of the body. In contrast, the other choices refer to components of the peripheral nervous system (PNS) and do not form part of the CNS. Peripheral nerves and somatic nerves are involved in transmitting signals to and from the limbs and organs, whereas spinal nerves branch out from the spinal cord into the periphery. Thus, the correct identification of the CNS as solely including the brain and spinal cord highlights its primary role in the body's neurological framework.

4. When stained with a Romanowsky stain, the RBC should be:

- A. Blue
- B. Green
- C. Purple
- D. Red**

When stained with a Romanowsky stain, red blood cells (RBCs) typically appear red. The Romanowsky stain is a type of supravital stain that is used in hematology to visualize blood cells, and it primarily differentiates between various types of cells in blood smears. In healthy samples, the hemoglobin within the RBCs retains its red color, making them distinguishable from other cellular components such as white blood cells which may exhibit varying shades due to the staining process. The red appearance of RBCs under this type of staining is indicative of their normal state, while other colors represent other cell types or changes that can occur with certain conditions. Understanding the appearance of stained cells helps in diagnosing various hematological conditions, reinforcing the importance of recognizing the typical colors associated with each cell type.

5. An IgM molecule:

- A. can cross the placenta
- B. is the largest antibody**
- C. is a monomer
- D. cannot fix complement

An IgM molecule is the largest antibody among all the antibody classes. It is a pentamer, made up of five monomeric units joined together by a protein structure called the J-chain. The size and structure of IgM allow it to have a high avidity for antigens, making it effective in agglutination and neutralization of pathogens.

6. What is a common ripening agent for haematoxylin?

- A. Sunlight**
- B. Tungsten
- C. Iron
- D. Haematin

In the context of preparing haematoxylin for staining, the common ripening agent is haematin. Haematin is a derivative of haematoxylin that facilitates the conversion of haematoxylin into a more effective staining agent, enhancing its ability to bind to cellular structures. Sunlight, while it may influence other chemical processes or color changes in some cases, is not a recognized agent for accelerating the ripening of haematoxylin. Tungsten does not play a role in the ripening process, and iron can impact other aspects of histology but is not involved directly in the ripening of haematoxylin. The ripening process is crucial as it transforms haematoxylin into a compound that can effectively stain tissues, making haematin the appropriate answer in this scenario.

7. Which of the following are bone cells that absorb and remove unwanted bone tissue?

- A. fossa
- B. osteoblast
- C. osteoclast**
- D. exostosis

The correct answer is osteoclast. Osteoclasts are specialized cells that play a critical role in the process of bone resorption, which involves breaking down bone tissue and facilitating the removal of unwanted or damaged bone. This process is essential for maintaining the balance of bone remodeling, allowing the body to adapt to stresses, repair injuries, and maintain overall bone health. Other options do not accurately represent the function of bone cells involved in the absorption and removal of bone tissue. For example, osteoblasts are responsible for the formation of new bone, contributing to bone density and structure, but they do not remove bone tissue. Similarly, a fossa refers to a depression or hollow in a bone, and exostosis describes a benign growth on the surface of a bone, neither of which are types of bone cells involved in bone resorption.

8. What will haematoxylin ripen into?

- A. Haematurg
- B. Haematein**
- C. Haematone
- D. Cyanmethemoglobin

Haematoxylin is a natural dye derived from the logwood tree and is commonly used in histology to stain cell nuclei. The term "ripen" in this context refers to the process by which haematoxylin undergoes a chemical transformation into haematein, typically through oxidation. This transformation is crucial because haematein is the active form of the dye that interacts with cellular components, allowing for effective staining. Haematein binds to bases in nucleic acids and shows a stronger affinity for DNA and RNA, making it valuable for visualizing cellular structures under the microscope. This property is particularly important in histological examinations, where viewing the detail of cell nuclei can provide significant diagnostic information. The other terms listed, while they might sound similar, do not pertain to the process of haematoxylin ripening. Haematurg and haematone do not represent well-known compounds in the context of staining or histology. Cyanmethemoglobin, which is used in blood gas analysis, is unrelated to haematoxylin or its transformations.

9. The classification for transporting biohazards, according to the TDG Act is:

- A. a. 6.2**
- B. b. 1A
- C. c. 2B
- D. d. 5.3

The classification for transporting biohazards according to the Transportation of Dangerous Goods (TDG) Act is indeed 6.2. This classification specifically refers to infectious substances that are capable of causing disease in humans or animals. When handling or transporting biohazardous materials, it is critical to follow regulations that ensure the safe and secure movement of these substances to prevent any potential exposure or outbreaks. The classification is essential for emergency responders to recognize the nature of the material involved during transportation incidents, ensuring proper safety protocols are implemented. Other classifications pertain to different types of hazardous materials. For example, the number 1A typically refers to explosives, while 2B can denote flammable gases. The classification 5.3 refers to oxidizing substances, which are not relevant to biohazards. Therefore, understanding the nature of the material being transported and its specific classification under the TDG Act is vital for safe practices in medical and laboratory environments.

10. What does Arrector Pilli refer to?

- A. the elasticity of the skin
- B. maintenance of body fluid
- C. muscles which produce "goose bumps"
- D. connective tissue in the epidermis

Arrector pili refers to the small muscles located at the base of hair follicles in the skin. When these muscles contract, they cause the hair to stand upright, which is what creates the phenomenon known as "goose bumps." This reaction is part of the body's response to cold temperatures or emotional states such as fear or excitement. The contraction of these muscles is an involuntary reflex, serving to promote warmth by trapping air close to the skin or to make an individual appear larger in response to threats. The other options do not accurately describe the function or structure related to arrector pili. Elasticity of the skin pertains to its ability to stretch and maintain shape, which is not associated with the contraction of these muscles. Maintenance of body fluid usually refers to processes related to hydration and homeostasis, which are unrelated to the function of arrector pili. Lastly, connective tissue in the epidermis refers to different types of support structures in the skin but does not specifically describe the muscles that create goose bumps.

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://osmt.examzify.com>

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

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