

ONTARIO GRADE 9 DESTREAMED SCIENCE (SNC1W1) 2026 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. Which process do plants utilize to produce food in the presence of sunlight?**
 - A. Cellular respiration
 - B. Photosynthesis
 - C. Digestion
 - D. Fermentation
- 2. Which of the following is not a characteristic of red giants?**
 - A. High luminosity
 - B. High temperature
 - C. Large size
 - D. Late life stage
- 3. What type of bonding is characterized by the sharing of electrons between atoms?**
 - A. Ionic Bonding
 - B. Covalent Bonding
 - C. Hydrogen Bonding
 - D. Van der Waals Forces
- 4. What is the primary function of the digestive system?**
 - A. To deliver oxygen to body cells
 - B. To break down food and absorb nutrients
 - C. To eliminate waste from the body
 - D. To process hormones produced by glands
- 5. What term describes the relationship where one organism preys on another for food?**
 - A. Symbiosis
 - B. Parasitism
 - C. Predation
 - D. Commensalism

- 6. Which of the following describes an effect of microgravity on astronauts?**
- A. Increased muscle mass
 - B. Astronaut bone loss
 - C. Enhanced vision
 - D. Heightened senses
- 7. What is the role of chlorophyll in photosynthesis?**
- A. To reflect light energy
 - B. To absorb light energy
 - C. To store glucose
 - D. To produce oxygen
- 8. What effect does temperature generally have on resistance of a conductor?**
- A. It decreases resistance
 - B. It increases resistance
 - C. It has no effect
 - D. It alternates resistance
- 9. How is the efficiency of a light bulb calculated?**
- A. By measuring brightness
 - B. As useful energy output over total energy input
 - C. By examining material quality
 - D. Using Ohm's law
- 10. What defines a region that has a gravitational pull so strong that nothing can escape from it?**
- A. White hole
 - B. Black hole
 - C. Neutron star
 - D. Event horizon

Answers

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

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Explanations

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1. Which process do plants utilize to produce food in the presence of sunlight?

- A. Cellular respiration
- B. Photosynthesis**
- C. Digestion
- D. Fermentation

Plants utilize photosynthesis to produce food in the presence of sunlight. This vital process occurs primarily in the chloroplasts of plant cells, where chlorophyll captures sunlight. During photosynthesis, plants convert carbon dioxide from the air and water from the soil into glucose (a type of sugar) and oxygen. The equation representing this process is: $6\text{CO}_2 + 6\text{H}_2\text{O} + \text{light energy} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$. The glucose produced serves as an essential energy source for the plant, supporting growth, development, and cellular functions. In contrast to photosynthesis, cellular respiration is a process used by plants (and animals) to break down glucose and release stored energy for use. Digestion refers to the process of breaking down food in multicellular organisms, which doesn't apply to plants as they produce their own food. Fermentation is an anaerobic process that occurs when oxygen is not available, generally in some bacteria and yeast, and is not a primary method of energy production for plants. Thus, photosynthesis is uniquely crucial for plants to create their food, utilizing sunlight as a driving force.

2. Which of the following is not a characteristic of red giants?

- A. High luminosity
- B. High temperature**
- C. Large size
- D. Late life stage

The choice of "high temperature" as the answer is insightful because red giants are typically characterized by their low surface temperatures despite their high luminosity. As stars evolve into the red giant stage, they exhaust the hydrogen in their cores and begin to fuse helium, which causes their outer layers to expand significantly. This expansion leads to a larger size and results in lower temperatures for their outer shells, contributing to their reddish appearance. In contrast, red giants possess high luminosity due to the vast amount of energy being produced by nuclear fusion in their expanded cores, and they are indeed very large as their outer layers have expanded significantly. Additionally, they represent a late-stage evolution in a star's life cycle, specifically after the main sequence phase. Hence, their defining characteristics do not include high surface temperatures, solidifying why this option stands out as not true for red giants.

3. What type of bonding is characterized by the sharing of electrons between atoms?

- A. Ionic Bonding
- B. Covalent Bonding**
- C. Hydrogen Bonding
- D. Van der Waals Forces

Covalent bonding is characterized by the sharing of electrons between atoms. In a covalent bond, two or more non-metal atoms come together to form a stable molecule by sharing their valence electrons. This sharing allows each atom to attain a full outer electron shell, which is energetically favorable, leading to the formation of strong bonds. For example, in a water molecule (H₂O), each hydrogen atom shares an electron with the oxygen atom, resulting in covalent bonds that hold the molecule together. This type of bonding is crucial in forming a wide range of organic and inorganic compounds, making it fundamental to the study of chemistry and biology. In contrast, ionic bonding involves the transfer of electrons from one atom to another, leading to the formation of charged ions that attract each other. Hydrogen bonding and Van der Waals forces refer to weaker interactions that occur between molecules rather than the direct sharing of electrons between atoms. Thus, covalent bonding uniquely and directly involves the sharing of electrons, making it the correct choice in this context.

4. What is the primary function of the digestive system?

- A. To deliver oxygen to body cells
- B. To break down food and absorb nutrients**
- C. To eliminate waste from the body
- D. To process hormones produced by glands

The primary function of the digestive system is to break down food and absorb nutrients. This process involves several organs, including the mouth, stomach, and intestines, where food is mechanically and chemically processed to extract essential nutrients such as carbohydrates, proteins, fats, vitamins, and minerals. These nutrients are vital for energy, growth, and overall health. After food is consumed, it undergoes various stages of digestion. In the mouth, it is chewed and mixed with saliva, which begins the breakdown of carbohydrates. Once it reaches the stomach, acid and enzymes further digest the food into a semi-liquid form. Finally, in the small intestine, nutrients are absorbed into the bloodstream through tiny structures called villi, allowing them to be delivered to cells throughout the body for use. While other systems perform important functions, such as delivering oxygen or eliminating waste, these activities are not the primary role of the digestive system. Thus, the main focus of the digestive system is indeed to break down food and absorb nutrients essential for maintaining bodily functions.

5. What term describes the relationship where one organism preys on another for food?

- A. Symbiosis
- B. Parasitism
- C. Predation**
- D. Commensalism

The term that describes the relationship where one organism preys on another for food is predation. In this ecological interaction, a predator hunts and consumes its prey, which is typically an animal. This relationship plays a critical role in maintaining the balance of ecosystems, as it helps control population sizes and can influence the evolution of species through natural selection. In predation, the predator benefits by obtaining nourishment, which is essential for its survival and reproduction. Meanwhile, the prey may face evolutionary pressures that can lead to adaptations such as camouflage, speed, or other defensive behaviors to evade predators. This concept is distinct from the other options. For instance, symbiosis encompasses various interactions between species, including mutualism and parasitism, and does not specifically refer to a predator-prey dynamic. Parasitism involves one organism benefiting at the expense of another without necessarily killing it, which is different from the direct consumption seen in predation. Commensalism is another type of relationship where one organism benefits while the other is neither helped nor harmed, which again does not involve predation. Understanding these different ecological interactions is essential for grasping how organisms influence each other's populations and behaviors in their environments.

6. Which of the following describes an effect of microgravity on astronauts?

- A. Increased muscle mass
- B. Astronaut bone loss**
- C. Enhanced vision
- D. Heightened senses

Microgravity has significant impacts on the human body, particularly for astronauts who spend extended periods in space. One of the well-documented effects is bone loss. In the microgravity environment of space, the mechanical stress that normally stimulates bone maintenance and growth is greatly reduced. This results in a decrease in bone density, making bones weaker and more susceptible to fractures upon return to Earth. During their time in space, astronauts can experience a loss of up to 1-2% of bone mass per month, especially in weight-bearing bones such as the spine and pelvis. This phenomenon is a direct consequence of the lack of gravitational pull that we experience on Earth, which normally helps maintain bone health. To counteract this issue, astronauts engage in regular exercise using specialized equipment designed for functioning in a microgravity environment, aiming to mitigate bone loss during their missions.

7. What is the role of chlorophyll in photosynthesis?

- A. To reflect light energy
- B. To absorb light energy**
- C. To store glucose
- D. To produce oxygen

Chlorophyll plays a crucial role in photosynthesis by absorbing light energy, particularly from the blue and red wavelengths of sunlight. During this process, chlorophyll molecules capture this energy, which is essential for converting carbon dioxide and water into glucose and oxygen. The absorbed light energy excites electrons in the chlorophyll, initiating a series of chemical reactions that ultimately lead to the formation of energy-rich glucose molecules. While chlorophyll does not reflect light energy, store glucose, or produce oxygen directly, it is vital for the overall photosynthetic process that results in the generation of glucose and the release of oxygen as a byproduct. Thus, understanding the role of chlorophyll as a light-absorbing pigment is fundamental to comprehending how plants harness solar energy to create food.

8. What effect does temperature generally have on resistance of a conductor?

- A. It decreases resistance
- B. It increases resistance**
- C. It has no effect
- D. It alternates resistance

In conductors, particularly metallic ones, resistance typically increases with temperature. This is due to the increased thermal energy that causes the metal ions to vibrate more vigorously. As the temperature rises, these vibrations make it more difficult for the free electrons to flow through the conductor, leading to a higher resistance. At low temperatures, the atoms in the conductor are more stable, resulting in less interference with the movement of electrons. However, as the temperature increases, the movement of atoms becomes more chaotic, which hinders the flow of electrons and thus increases resistance. This relationship is a fundamental principle in understanding electrical conductivity in materials, especially metals.

9. How is the efficiency of a light bulb calculated?

- A. By measuring brightness
- B. As useful energy output over total energy input**
- C. By examining material quality
- D. Using Ohm's law

The efficiency of a light bulb is calculated by comparing the useful energy output to the total energy input. This is done by determining how much of the energy consumed by the bulb is converted into light energy, which is the desired useful output, versus how much energy is wasted as heat or not utilized for lighting. The formula for efficiency can be expressed as a percentage, where efficiency equals the useful output energy divided by the total input energy, multiplied by 100. This approach effectively highlights the light bulb's performance and helps consumers choose more energy-efficient options. In contrast, measuring brightness alone does not provide a complete view of efficiency since it doesn't account for the energy consumed to produce that brightness. Examining material quality may give insights into the potential for efficiency but does not directly measure it. Using Ohm's law relates to electrical resistance and current flow but does not directly pertain to calculating efficiency in the context of light bulbs.

10. What defines a region that has a gravitational pull so strong that nothing can escape from it?

- A. White hole
- B. Black hole**
- C. Neutron star
- D. Event horizon

A region that has a gravitational pull so strong that nothing can escape from it is defined as a black hole. Black holes are formed when a massive star collapses under its own gravity at the end of its life cycle. The gravitational pull of a black hole is so intense that it overwhelms all other forces, drawing everything, including light, into it. This is why they appear "black," as no light can escape their grasp, making them invisible against the backdrop of space. In contrast, the other choices represent different astronomical phenomena but do not fit the description provided in the question. A white hole is theorized as the opposite of a black hole, from which matter and light can escape but cannot enter. A neutron star is an incredibly dense remnant of a supernova, but it does not have the escape-velocity limitations of a black hole. The event horizon refers to the boundary surrounding a black hole beyond which nothing can escape, but it is not itself the region that causes the escape issue; it is simply the threshold. Thus, the correct identification of the gravitational region described is indeed a black hole.

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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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