ONTARIO GRADE 9 SCIENCE CLASS PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE

https://grade-9-science-ontario.examzify.com

Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

Table of Contents

Copyright 1

Table of Contents 2

Introduction 3

How to Use This Guide 4

Questions 5

Answers 8

Explanations 10

Next Steps 15

SAMPLE

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.

SAMPLE

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!

SAMPLE

Questions

SAMPLE

1. How far does light travel in a year?

A. The distance it takes to reach the moon

B. The distance from Earth to the Sun

C. The distance light travels in a year

D. The circumference of the Earth

2. What does charge capacity refer to in an ecological context?

A. The maximum charge an electronic device can hold

B. The ability of an ecosystem to support its population before death occurs from lack of resources

C. The total electrical charge of an ecosystem

D. The potential energy stored in chemical bonds of organisms

3. What is the purpose of a pesticide?

A. To nurture plants

B. To pollinate flowers

C. To destroy harmful organisms

D. To fertilize soil

4. How are the loads connected in a series circuit?

A. In parallel branches

B. In a loop without intersections

C. End to end creating a single path for electron flow

D. They are not directly connected

5. What is a black hole?

A. A region in space where gravity pulls so much that even light cannot get out

B. A new galaxy forming

C. The end of the universe

D. The collapse of a large star

6. What is a negatively charged object?

A. An object that has fewer electrons than protons

B. An object that has the same number of protons and electrons

C. An object that has more electrons than protons

D. An object made up of only neutrons

SAMPLE

7. Which statement best describes a biome?

A. A small, controlled environment with similar organisms

B. A large ecological area with specific climate and communities

C. An area defined solely by temperature and elevation

D. A temporary ecosystem that changes frequently

8. What is nitrogen fixation?

A. The process of converting nitrogen gas into usable nitrogen compounds for plants

B. Fixing nitrogen levels in the atmosphere

C. The decomposition of nitrogen from dead organisms

D. The release of nitrogen into the atmosphere by plants

9. What role does the load play in an electric circuit?

A. It generates electrical energy

B. It stores electric charge

C. It converts electrical energy into other forms of energy

D. It stops the flow of electric current

10. What is the purpose of grounding an object?

A. To give it a positive electric charge

B. To ensure it can hold more electrons

C. To connect it to a large body capable of removing an electric charge

D. To isolate it from its surrounding environment

SAMPLE

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. How far does light travel in a year?

A. The distance it takes to reach the moon

B. The distance from Earth to the Sun

C. The distance light travels in a year

D. The circumference of the Earth

The correct answer is the distance light travels in a year, which is referred to as a light-year. A light-year is a unit of distance that represents how far light travels in a vacuum in one year. Since light moves at a speed of about 299,792 kilometers per second (or roughly 186,282 miles per second), this distance becomes extraordinarily vast when calculated over a year. Specifically, light travels approximately 9.46 trillion kilometers in just one year. Understanding this concept is essential, as light-years are frequently used in astronomy to express distances between stars and galaxies, helping us gauge the vast scales of the universe. The other options—such as the distance to the moon, the distance from Earth to the Sun, and the circumference of Earth—are specific measurements of distance rather than units of distance over time, which is what a light-year represents.

2. What does charge capacity refer to in an ecological context?

A. The maximum charge an electronic device can hold

B. The ability of an ecosystem to support its population before death occurs from lack of resources

C. The total electrical charge of an ecosystem

D. The potential energy stored in chemical bonds of organisms

Charge capacity in an ecological context refers to the ability of an ecosystem to sustain its population size before resource limitations lead to negative consequences such as population decline or death due to scarcity. This concept is crucial in understanding the dynamics of ecosystems, as it highlights the balance between available resources—such as food, water, and habitat—and the number of organisms that can be supported within a given environment. When a population exceeds this capacity, overutilization of resources occurs, leading to increased competition, stress, and potential mortality among the organisms. The other choices do not fit within the ecological context. The first refers to electronic devices and their ability to hold electric charge, which is unrelated to ecology. The third option incorrectly ties the term to total electrical charge, which again does not apply to living ecosystems. Lastly, the fourth option discusses potential energy in chemical bonds, which, while relevant to biology, is not what charge capacity specifically means in terms of ecosystem support and sustainability.

3. What is the purpose of a pesticide?

A. To nurture plants

B. To pollinate flowers

C. To destroy harmful organisms

D. To fertilize soil

A pesticide is a substance used to control, destroy, or repel harmful insects, weeds, fungi, rodents, or other organisms that can be damaging to plants, crops, or human health. Pesticides are specifically designed to eliminate or reduce the presence of these organisms, making option A and B incorrect. Fertilizers, on the other hand, are used to provide essential nutrients to plants to aid in their growth, so option D is also incorrect. Therefore, the purpose of a pesticide is to destroy harmful organisms, making option C the correct answer.

SAMPLE

4. How are the loads connected in a series circuit?

A. In parallel branches

B. In a loop without intersections

C. End to end creating a single path for electron flow

D. They are not directly connected

In a series circuit, the loads are connected end to end, creating a single path for electric current to flow. This means that the same current travels through each component connected in the circuit sequentially. If one load, such as a light bulb, were to fail or be removed, the entire circuit would become incomplete, and all devices would stop functioning. This configuration is integral to the definition of a series circuit, which emphasizes that all components share the same current flowing through them. Understanding this structure helps in grasping basic electrical principles, such as voltage division across components and current uniformity throughout the circuit. The characteristics of a series circuit are important for troubleshooting and designing simple electrical systems.

5. What is a black hole?

A. A region in space where gravity pulls so much that even light cannot get out

B. A new galaxy forming

C. The end of the universe

D. The collapse of a large star

A black hole is a region in space where gravity is extremely strong due to the concentration of matter in a small space. This causes the region to have such a strong gravitational pull that even light cannot escape, hence the term "black hole". Option B is incorrect because black holes do not form new galaxies, they can only be found within existing galaxies. Option C is incorrect because while the concept of a black hole may lead to speculation about the end of the universe, it is not the definitive end. Option D is incorrect because, while the collapse of a large star may lead to the creation of a black hole, it is not the only means by which a black hole can form.

6. What is a negatively charged object?

A. An object that has fewer electrons than protons

B. An object that has the same number of protons and electrons

C. An object that has more electrons than protons

D. An object made up of only neutrons

A negatively charged object is an object that has more electrons than protons. This creates a negative electric charge on the object. Option A is incorrect because this would cause a neutral electric charge, as protons and electrons have equal and opposite charges. Option B is also incorrect because this would also result in a neutral electric charge. Option D is incorrect because neutrons do not have a charge, therefore an object made up of only neutrons would not have an electric charge.

SAMPLE

7. Which statement best describes a biome?

A. A small, controlled environment with similar organisms

B. A large ecological area with specific climate and communities

C. An area defined solely by temperature and elevation

D. A temporary ecosystem that changes frequently

A biome is characterized as a large ecological area that encompasses specific climatic conditions and distinct communities of plants and animals. This definition emphasizes the expansive nature of biomes, which span vast geographic regions and are shaped by various environmental factors such as temperature, precipitation, and soil type. Each biome supports a unique set of organisms that have adapted to thrive in those specific conditions. In contrast, other statements either restrict the scale or misunderstanding of what constitutes a biome. For instance, describing a biome as a small, controlled environment with similar organisms limits its scope substantially. Additionally, while temperature and elevation are important factors influencing ecosystems, a biome is defined by a wider array of criteria including climate, vegetation, and animal life. Lastly, describing a biome as a temporary ecosystem contradicts the longevity and stability often associated with these large-scale environments, which can remain in place for extended periods, albeit with some seasonal changes.

8. What is nitrogen fixation?

A. The process of converting nitrogen gas into usable nitrogen compounds for plants

B. Fixing nitrogen levels in the atmosphere

C. The decomposition of nitrogen from dead organisms

D. The release of nitrogen into the atmosphere by plants

Nitrogen fixation is the process of converting nitrogen gas into usable nitrogen compounds for plants. It is not the fixing of nitrogen levels in the atmosphere (option B) as that would imply controlling the levels rather than converting them. It is also not the decomposition of nitrogen from dead organisms (option C) as that is the breakdown of already existing nitrogen compounds. Lastly, it is not the release of nitrogen into the atmosphere by plants (option D) as that would be the opposite of fixing it. Instead, nitrogen fixation is the important process of converting nitrogen gas into a form that can be used by plants for growth and development.

9. What role does the load play in an electric circuit?

A. It generates electrical energy

B. It stores electric charge

C. It converts electrical energy into other forms of energy

D. It stops the flow of electric current

The load in an electric circuit is the component that converts the electrical energy into other forms of energy, such as heat, light, or motion. This is important because without the load, the circuit would not be able to perform its desired function. Option A is incorrect because it is the power source, such as a battery or power plant, that generates electrical energy. Option B is incorrect because the component that stores electric charge is the capacitor, not the load. Option D is incorrect because it is the function of a resistor to resist the flow of electric current, not the load.

SAMPLE

10. What is the purpose of grounding an object?

A. To give it a positive electric charge

B. To ensure it can hold more electrons

C. To connect it to a large body capable of removing an electric charge

D. To isolate it from its surrounding environment

Grounding an object involves connecting it to a large body, such as the Earth, that can easily absorb and remove electric charges. This helps to prevent dangerous buildup of excess charges that can cause damage or pose a safety hazard. Options A and B are incorrect because grounding does not involve adding or storing electric charges, but rather removing them. Option D is incorrect as grounding actually involves connecting an object, rather than isolating it. It is important to ground objects to ensure their safety and prevent potential hazards caused by electric charges.

SAMPLE

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://grade-9-science-ontario.examzify.com

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

SAMPLE