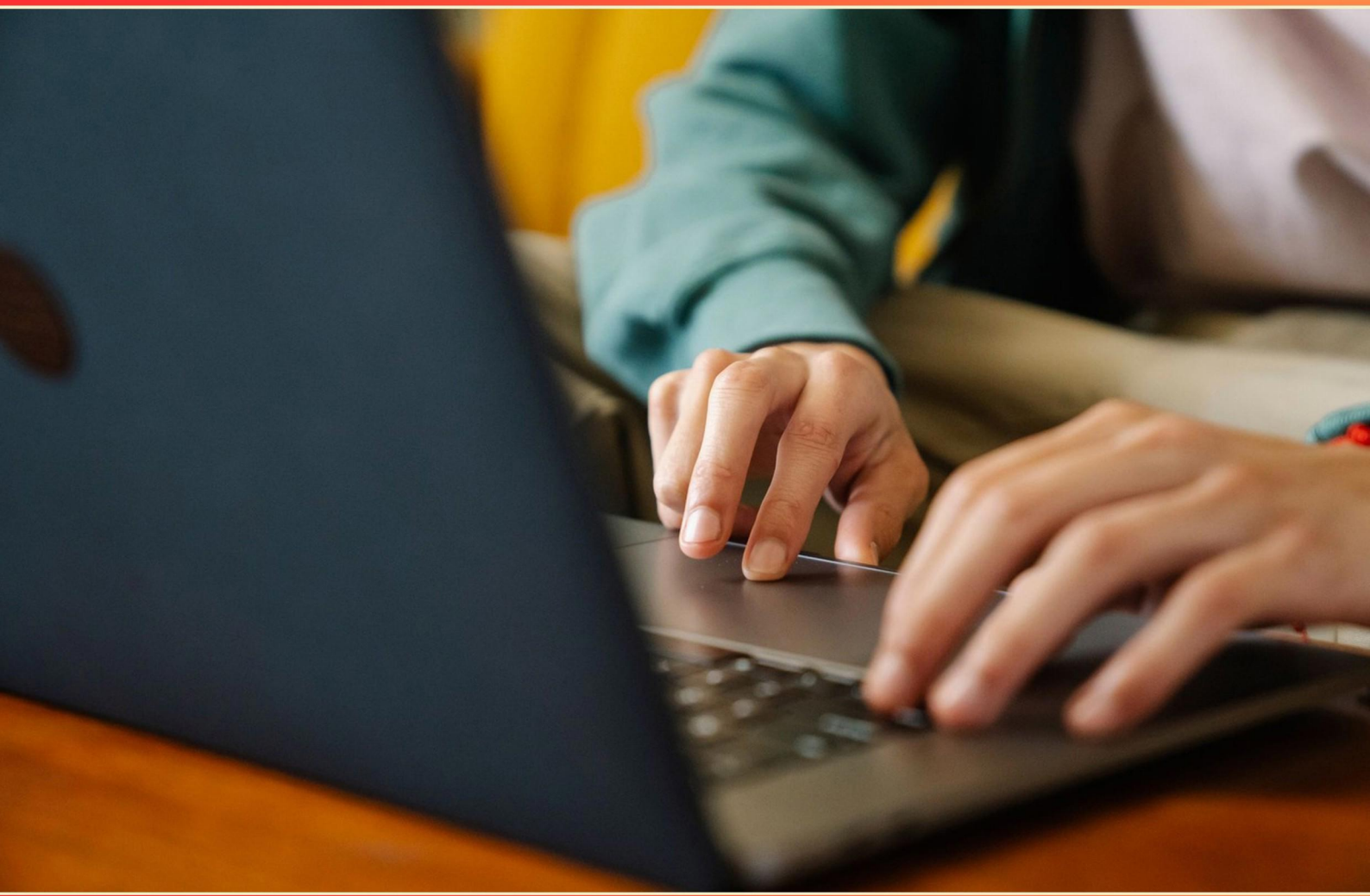
CODE.ORG COMPUTER SCIENCE DISCOVERIES PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE

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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

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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. What does the alt attribute provide for an image tag?

A. It defines the image's height.

B. Alternative text for accessibility and when the image can't load.

C. It defines a caption for the image.

D. It sets the image source URL.

2. What term describes a device that provides a path for an electric current to flow, often modifying that current?

A. Conductor

B. Battery

C. Transistor

D. Circuit

3. Which term refers to a collection of public licenses that allow sharing and reuse?

A. Hyperlink

B. Creative Commons

C. Copyright

D. Intellectual Property

4. What is the relationship between a circuit and computation?

A. Circuits can perform logical and mathematical operations

B. Circuits store large amounts of data like libraries

C. Circuits are only used for power

D. Circuits cannot process data

5. Which term describes a reusable block of code that performs a specific task?

A. Abstraction

B. Boolean

C. Function

D. Expression

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6. Which statement about bar charts is true?

A. It shows distribution across a single category.

B. It is used for geographical data.

C. It is used to compare quantities across different categories.

D. It illustrates relationships between multiple variables.

7. The placement of text farther to the right or left of the surrounding text, making it easier to understand the program's structure.

A. Indentation

B. Hyperlink

C. Whitespace

D. Digital Footprint

8. Encrypt means

A. to reveal information

B. to make information readable

C. to store information

D. to change information so that its meaning is hidden

9. Which HTML tag encloses the main content of a page?

A. tag

B. <body> tag

C. <head> tag

D. <main> tag

10. Which statement about global variables in Scratch is true?

A. Global variables can only be used by one sprite.

B. Global variables cannot be accessed by any sprite.

C. Global variables exist only during the current scene.

D. Global variables are accessible to all sprites.

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Answers

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

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Explanations

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1. What does the alt attribute provide for an image tag?

A. It defines the image's height.

B. Alternative text for accessibility and when the image can't load.

C. It defines a caption for the image.

D. It sets the image source URL.

The alt attribute holds a text description of the image that helps people who can't see the picture and systems that can't load it. Screen readers read the alt text aloud so a user understands what the image conveys, and if the image fails to load, the text gives the viewer context about what was intended. It's also helpful for search engines to understand the image content. Remember, this isn't about the image's size, a caption, or the image URL—the height, width, and src attributes serve those other purposes. If the image is purely decorative and doesn't add information, the alt can be left empty to signal that nothing is conveyed. For example: <img src="dog.jpg" alt="A brown dog smiling in a sunny yard">

2. What term describes a device that provides a path for an electric current to flow, often modifying that current?

A. Conductor

B. Battery

C. Transistor

D. Circuit

An electrical circuit is the closed loop that lets current flow from a source, through loads or components, and back. It isn't just a wire or a single device; it's the whole pathway that can include elements that shape the current, like resistors that limit it or transistors that control it. A conductor by itself is only a material that can carry current, not the whole system. A battery provides energy to push the current, but not the path itself. A transistor is a component inside a circuit that can modify the current, but the idea of a path that current travels through—often with such modifying elements—is best described by a circuit.

3. Which term refers to a collection of public licenses that allow sharing and reuse?

A. Hyperlink

B. Creative Commons

C. Copyright

D. Intellectual Property

Public licenses that spell out how a work can be shared and reused are designed to encourage people to use and remix creations while respecting the creator's rights. Creative Commons is a family of licenses that does exactly this: they provide standardized terms that let others reuse, remix, or distribute a work as long as they follow the conditions (like giving attribution or not using it commercially). The other terms don't fit as well because a hyperlink is just a link to a page, copyright is a legal right that generally controls what you can do with a work rather than enabling broad reuse, and intellectual property is a broad umbrella term for legal rights over creations but not a specific set of reuse licenses.

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4. What is the relationship between a circuit and computation?

A. Circuits can perform logical and mathematical operations

B. Circuits store large amounts of data like libraries

C. Circuits are only used for power

D. Circuits cannot process data

Computation is done by circuits that transform input signals into output signals using logical rules. Digital circuits are built from logic gates that perform basic operations like AND, OR, and NOT. By wiring many gates together, circuits can implement more complex operations, including comparisons and arithmetic, which is how a CPU carries out instructions. This is why circuits are able to perform logical and mathematical operations—their main role in computation is to manipulate data through these operations. The other statements miss the mark: circuits aren't primarily for storing lots of data, they aren't only for power, and they can process data.

5. Which term describes a reusable block of code that performs a specific task?

A. Abstraction

B. Boolean

C. Function

D. Expression

A function is a reusable block of code that performs a specific task. Think of it as a named recipe in your program: you define the steps once, and then you can run that same set of steps anywhere in your code by calling the function. It can also take inputs (parameters) and often returns a result, which makes it flexible and easy to reuse in different places without duplicating code. This reuse is what makes functions so powerful for organizing programs and breaking problems into manageable parts. Abstraction is about hiding unnecessary details to focus on the important parts of a problem, not about a reusable block of code. A Boolean is a data type that represents true or false. An expression is a combination of values and operators that evaluates to a value, but it isn't a standalone reusable block of code like a function.

6. Which statement about bar charts is true?

A. It shows distribution across a single category.

B. It is used for geographical data.

C. It is used to compare quantities across different categories.

D. It illustrates relationships between multiple variables.

Bar charts are built to compare quantities across different categories. Each category has a bar whose height (or length) represents its value, so you can quickly see which category has more or less and how categories stack up against each other. This makes them ideal for questions like which category is largest or how several categories compare at a glance. The other statements don't fit as the main purpose: a bar chart isn't primarily used to show distribution within a single category—that's more a histogram; it isn't specifically for geographical data—maps and geographic charts serve that purpose; and it doesn't focus on illustrating relationships between multiple variables—that role belongs to plots like scatter plots.

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7. The placement of text farther to the right or left of the surrounding text, making it easier to understand the program's structure.

A. Indentation

B. Hyperlink

C. Whitespace

D. Digital Footprint

Indentation is the spacing at the start of lines that shows which statements belong together. When you push a line to the right or left, you create a visual block, indicating that the lines inside belong to a loop, a conditional, a function, or another structure. That visual cue helps you understand the program's structure quickly and see how control moves through the code. In this question, describing text being placed farther to the right or left to reveal structure matches what indentation does. Hyperlink is about linking to other pages, Digital Footprint is about data you leave online, and while whitespace is the general idea of spaces and tabs, indentation is the specific practice that uses that whitespace to highlight code blocks and impact readability.

8. Encrypt means

A. to reveal information

B. to make information readable

C. to store information

D. to change information so that its meaning is hidden

Encryption is about turning readable information into a secret form so that only someone with the right key can read it. That's why the correct idea is to change information so its meaning is hidden. Imagine sending a message that looks like random letters to anyone who intercepts it; when the recipient uses the correct key, the message becomes readable again. The other choices describe revealing, storing, or making information readable, which are not what encryption does.

9. Which HTML tag encloses the main content of a page?

A. tag

B. <body> tag

C. <head> tag

D. <main> tag

The main idea is understanding where the content that actually appears on the page is stored in HTML. The body element is the container for all visible content—text, images, links, forms, and whatever you place on the page. It sits inside the root html element, after the head. The head holds metadata like the title, styles, and scripts and isn't shown as part of the page content. A div is just a generic grouping element you can use anywhere inside the body to organize layout, but it doesn't define the page's visible content by itself. The main element is a semantic marker for the central content, but it's optional and not required to wrap every item on the page; you often put the main content inside body and then use main to highlight the core section. So the tag that encloses the actual visible content of the page is the body element.

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10. Which statement about global variables in Scratch is true?

A. Global variables can only be used by one sprite.

B. Global variables cannot be accessed by any sprite.

C. Global variables exist only during the current scene.

D. Global variables are accessible to all sprites.

Global variables in Scratch are values shared by every sprite in a project. When you create a variable and choose "For all sprites," you give it global scope, so any sprite can read or change it and everyone sees the same value. This is why the statement that global variables are accessible to all sprites is true—they're designed to be shared data. Use them for things like a score or a timer that all sprites need to reference. If you instead made a variable "for this sprite only," it would stay local to that sprite and wouldn't be visible to others. Also, global variables aren't tied to a single scene; they persist across scenes unless you reset them in your code.

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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:

https://codeorgcompscidiscoveries.examzify.com

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

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