IGCSE ALGORITHMS AND PSEUDOCODE FOUNDATIONS FOR G8 PRACTICE EXAM (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. What is the term for invoking a subroutine that does not return a value?

A. Run subroutine

B. Issue function call

C. Execute procedure call

D. Call procedure

2. Which term refers to a named value passed into a function or procedure?

A. Local variables

B. Global variables

C. Arrays

D. Parameters

3. Which operation in boolean logic inverts a truth value?

A. AND

B. OR

C. XOR

D. NOT

4. Which loop repeats until the condition becomes true?

A. Repeat until loop

B. For loop

C. Case statement

D. Return statement

5. Which term describes non-volatile storage such as disks used for long-term data storage?

A. RAM

B. Secondary storage

C. Cloud storage

D. Virtual memory

6. Which command prints results to the screen?

A. Output command

B. If statement

C. While loop

D. For loop

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7. What term describes a computer designed to perform a single fixed function and is often used in devices?

A. Embedded system

B. Personal computer

C. Server

D. Mainframe

8. Which operation calculates the central tendency by adding values and dividing by how many values?

A. Finding maximum

B. Finding average

C. Substring

D. Length

9. Which concept refers to code with clear and maintainable structure that is easy to modify?

A. Integrated development environment

B. Maintainable program

C. Commenting

D. Round

10. Which term is used for diagrams showing how parts connect?

A. Inputs

B. Outputs

C. Structure diagrams

D. Validation checks

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Answers

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

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Explanations

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1. What is the term for invoking a subroutine that does not return a value?

A. Run subroutine

B. Issue function call

C. Execute procedure call

D. Call procedure

Calling a procedure is the standard way to describe invoking a subroutine that doesn't return a value. In programming, a function returns a value, whereas a procedure performs actions without yielding a result. The act of starting that subroutine is called a procedure call, i.e., you call the procedure. Other phrases are less conventional or imply a return value, so the most precise and widely used term is call procedure.

2. Which term refers to a named value passed into a function or procedure?

A. Local variables

B. Global variables

C. Arrays

D. Parameters

Understanding how functions receive input. Parameters are the named placeholders a function defines to accept input. They appear in the function's header as the names that the function uses inside its body to work with the inputs. When you call the function, you provide actual values, which are called arguments, and these fill the parameters with those values at runtime. So the term for a named value used by the function's interface is parameters. Local and global variables are different ideas: they are storage locations that hold data used by the program, not the inputs specified in a function's signature. An array is a collection of values, not a single input term.

3. Which operation in boolean logic inverts a truth value?

A. AND

B. OR

C. XOR

D. NOT

Negation in boolean logic flips a value. The NOT operator is unary, taking a single boolean input and yielding its opposite: NOT true is false, NOT false is true. This is exactly what inverting a truth value means. The other operators combine inputs: AND requires both true, OR requires at least one true, and XOR is true if exactly one input is true. They don't simply flip a single value, so they don't perform inversion.

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4. Which loop repeats until the condition becomes true?

A. Repeat until loop

B. For loop

C. Case statement

D. Return statement

The idea being tested is how loop termination works when the loop continues "until" a condition is true. A repeat-until loop runs its body and then checks the condition; if the condition is false, it repeats, and it stops as soon as the condition becomes true. It also guarantees at least one execution of the loop body. This matches the description of repeating until the condition becomes true, which is exactly what a repeat-until structure does. In contrast, a for loop is driven by a counter or a fixed number of iterations and isn't defined by "repeat until the condition is true." A case statement is a branching decision, not a loop, and a return statement exits a function, not a loop.

5. Which term describes non-volatile storage such as disks used for long-term data storage?

A. RAM

B. Secondary storage

C. Cloud storage

D. Virtual memory

Non-volatile storage that keeps data when the computer is off and is used to hold information long term is called secondary storage. This covers disks and similar hardware like hard drives and SSDs, which store your files and programs even when power isn't applied. It contrasts with RAM, which is volatile and forgets its contents when the power is off, and with virtual memory, which uses disk space to extend RAM rather than to provide long-term storage. Cloud storage is also persistent, but it's a service model rather than the hardware term for local storage—so the best fit for describing disks used for long-term storage is secondary storage.

6. Which command prints results to the screen?

A. Output command

B. If statement

C. While loop

D. For loop

Displaying information on the screen is done with an output operation. The command that prints results to the screen is the output command, which sends data to the display directly. Conditional statements like if decide whether to run code, and loops like while and for repeat code, but they do not print by themselves; they control how often or whether the code runs. An output instruction inside any of these can show something on screen, but the one that prints data itself is the output command.

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7. What term describes a computer designed to perform a single fixed function and is often used in devices?

A. Embedded system

B. Personal computer

C. Server

D. Mainframe

The idea being tested is that some devices include a computer that is built specifically to do one fixed job within a larger system. This kind of computer is called an embedded system. It's designed to perform a single function, often with tight real-time requirements, and is usually integrated into a device like a microwave, thermostat, or car controller. Because its software and hardware are tailored for that particular task, it isn't meant to run a wide range of programs like a general-purpose computer would. Other options describe broader, more flexible computing roles. A personal computer is built to run many kinds of software for various tasks, not just one fixed function. A server provides services to other computers, typically handling multiple tasks or users. A mainframe is a large, powerful computer used for extensive processing across many users. None of these match the idea of a single-purpose computer embedded inside devices.

8. Which operation calculates the central tendency by adding values and dividing by how many values?

A. Finding maximum

B. Finding average

C. Substring

D. Length

This is about the mean, which is a way to describe a dataset by a central value. The operation described—summing all the values and then dividing by how many values there are—calculates the mean, commonly called the average. It gives a single number that represents the middle point of the data. For example, with values 2, 4, 6, and 8, the result is (2+4+6+8)/4 = 5. The other options don't do this: finding the maximum selects the largest value, substring extracts a part of a string, and length counts how many items or characters are present.

9. Which concept refers to code with clear and maintainable structure that is easy to modify?

A. Integrated development environment

B. Maintainable program

C. Commenting

D. Round

Maintaining code that is easy to modify hinges on a program with a clear, modular structure. When code is organized into well-defined components, uses meaningful names, and minimizes tight coupling, future changes can be made quickly and safely without unintended effects. That quality is captured by describing the code as a maintainable program. An integrated development environment is a useful tool for writing and debugging, but it doesn't by itself define how easy the code is to modify. Commenting helps explain what parts do, which aids understanding, but it doesn't guarantee the overall structure or ease of modification. A round has no bearing on programming concepts.

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10. Which term is used for diagrams showing how parts connect?

A. Inputs

B. Outputs

C. Structure diagrams

D. Validation checks

Diagrams that show how parts connect focus on the arrangement and links between components of a system. They illustrate which modules exist and how they interact, including interfaces and dependencies, giving a clear picture of the system's structure. This makes the overall organization visible rather than the data that goes in or comes out or the rules used to check data. So, the term that fits this idea is structure diagrams. In contrast, inputs are about data entering the system, outputs are the results produced, and validation checks are the rules that ensure data is acceptable.

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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://igcsealgorithmspseudocodeg8.examzify.com

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

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