

CGS CONCEPTS 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.

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 HTML, and what does it do?

- A. A programming language used for server-side logic.
- B. A style sheet language that defines layout.
- C. A scripting language used in browsers.
- D. HyperText Markup Language; structures content for the web.

2. Which item might be risky to uninstall from a Windows PC laptop?

- A. Microsoft Works 6-9 Converter
- B. Microsoft Word
- C. Adobe Acrobat Reader
- D. Calculator

3. Which is the most powerful computer type?

- A. Supercomputer
- B. Mainframe
- C. Workstation
- D. Personal Computer

4. What is a firewall rule?

- A. An instruction that allows or blocks network traffic based on criteria.
- B. A policy to enforce passwords.
- C. A device that monitors bandwidth usage.
- D. A method of data backup.

5. Big Data Analytics are used to turn data from internet databases into what?

- A. Raw data dumps
- B. Intelligent, usable information
- C. Random noise
- D. Static reports

6. Which term describes systems that process money transactions more efficiently?

- A. Transaction Processing Systems
- B. Decision Support Systems
- C. Executive Information Systems
- D. Customer Relationship Management

- 7. Explain the concept of throughput vs latency.**
- A. Throughput Is The Amount Of Work Completed Over Time; Latency Is The Time To Complete A Single Operation
 - B. Throughput Is Network Bandwidth; Latency Is Storage Speed
 - C. Throughput Is Memory Speed; Latency Is CPU Speed
 - D. Throughput And Latency Are The Same
- 8. Which of the following describes the periodic doubling of transistor counts used to estimate technology development pace?**
- A. Moore's Law
 - B. Ohm's Law
 - C. Boyle's Law
 - D. Pascal's Principle
- 9. The _____ computer creates images on your computer.**
- A. GPU
 - B. CPU
 - C. RAM
 - D. ROM
- 10. What is the role of an operating system's kernel?**
- A. Renders the User Interface
 - B. Core Component That Manages Hardware Resources and Provides Low-Level Services to Software
 - C. Manages Network Routing
 - D. Houses User Data

Answers

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

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Explanations

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1. What is HTML, and what does it do?

- A. A programming language used for server-side logic.
- B. A style sheet language that defines layout.
- C. A scripting language used in browsers.
- D. HyperText Markup Language; structures content for the web.**

HTML is the language used to structure content on the web. It uses tags to mark up parts of a page—headings, paragraphs, lists, images, links, forms—so a browser can understand what each piece is and render it appropriately. The “HyperText” part refers to hyperlinks that connect documents across the web, and “Markup” means you describe the content’s role and meaning rather than how it should look. Styling and layout are handled by CSS, and interactivity is added with JavaScript, but HTML provides the essential structure that those technologies work with. That’s why the description that defines HTML as HyperText Markup Language and emphasizes structuring content for the web is the best fit.

2. Which item might be risky to uninstall from a Windows PC laptop?

- A. Microsoft Works 6-9 Converter**
- B. Microsoft Word
- C. Adobe Acrobat Reader
- D. Calculator

The main idea here is about compatibility with older data and why a bridge utility matters. The Microsoft Works 6-9 Converter is a specialized tool that lets you open and convert older Works documents (.wps) into modern formats that current apps can read, such as Word. If you uninstall this converter, you risk losing access to those legacy files or having trouble converting them, especially if you have documents saved in the Works format. In other words, it serves as a compatibility bridge for files created with older software, so removing it can create real data-access issues on the laptop. The other items are more about current-day tasks and common workflows. Word is the primary tool for editing Word documents, so removing it would block a key capability for many users. Adobe Acrobat Reader handles PDFs, and while you could replace it with another viewer, removing it isn’t about locking you out of a specific older data format. Calculator is a basic built-in utility; while you might prefer another calculator app, its absence is less likely to block access to existing files or formats. So, the converter stands out as the one that might be risky to uninstall because it preserves access to legacy Works documents, which otherwise could become unreadable.

3. Which is the most powerful computer type?

- A. Supercomputer**
- B. Mainframe
- C. Workstation
- D. Personal Computer

When measuring which type is the most powerful, the key idea is raw computational capability and how well a system can run many calculations in parallel. A supercomputer is built specifically to maximize this capability, using thousands or even millions of processors working together, plus specialized accelerators and fast interconnects. This design targets extreme throughput for demanding scientific and engineering tasks—climate modeling, physics simulations, and large-scale data analysis—where you need enormous operations per second. Mainframes excel at reliability, uptime, and handling massive numbers of concurrent transactions and I/O requests, along with strong virtualization and security features. But their focus isn’t pushing the extreme end of compute speed. Workstations are high-end but still serve a single user or a small team, with far less parallel processing power than a supercomputer. Personal computers are designed for everyday tasks and consumer workloads, offering far less raw compute capability than the other types. So, for sheer computational power, the supercomputer stands out as the strongest among these options.

4. What is a firewall rule?

- A. An instruction that allows or blocks network traffic based on criteria.**
- B. A policy to enforce passwords.
- C. A device that monitors bandwidth usage.
- D. A method of data backup.

Firewall rules are instructions that tell the firewall whether to let or block specific network traffic by evaluating criteria such as where the traffic is coming from, where it's going, the protocol, and the port, and then applying an action like allow or deny. This exact mechanism is what defines a firewall rule, so the option describing instructions to allow or block traffic based on criteria is the best match. Other options describe different IT functions—not how traffic is controlled by a firewall: password policies govern authentication, bandwidth monitors track usage, and data backups protect data. In practice, a rule might permit web traffic to a server on port 80 while blocking other ports from untrusted sources, illustrating how rules enforce access.

5. Big Data Analytics are used to turn data from internet databases into what?

- A. Raw data dumps
- B. Intelligent, usable information**
- C. Random noise
- D. Static reports

Big data analytics focuses on turning vast amounts of data from internet databases into intelligent, usable information. The data we collect from web sources is often raw, messy, and unstructured. Analytics uses cleaning, integration, transformation, and modeling (including statistical methods and machine learning) to reveal patterns, correlations, and predictions. The end result is information that can be acted on—insights that help guide decisions, optimize processes, personalize experiences, and forecast trends. It's not just a raw data dump, random noise, or a single static report; it's dynamic, actionable intelligence that informs real-world choices.

6. Which term describes systems that process money transactions more efficiently?

- A. Transaction Processing Systems**
- B. Decision Support Systems
- C. Executive Information Systems
- D. Customer Relationship Management

The main idea here is systems that handle the day-to-day flow of monetary events with speed, accuracy, and reliability. Transaction Processing Systems are built to capture, validate, and record every financial transaction as it happens, then update accounts and ledgers in real time or near real time. This tight, automated processing reduces errors, increases throughput, and provides an immediate, auditable record of money movements. Other system types serve different purposes: Decision Support Systems help with analysis and decision-making using data and models rather than processing routine transactions; Executive Information Systems provide high-level dashboards and summaries for executives; Customer Relationship Management focuses on managing interactions with customers and sales processes. So for efficiently handling money transactions, the term that fits best is Transaction Processing Systems.

7. Explain the concept of throughput vs latency.

- A. Throughput Is The Amount Of Work Completed Over Time; Latency Is The Time To Complete A Single Operation
- B. Throughput Is Network Bandwidth; Latency Is Storage Speed**
- C. Throughput Is Memory Speed; Latency Is CPU Speed
- D. Throughput And Latency Are The Same

Understanding the difference between throughput and latency is key to diagnosing performance. Latency is the time it takes for a single operation to complete from start to finish. It's the delay you experience for one item or one request—from the moment it's issued to the moment the result is delivered. In practice, this is like the time it takes for a single disk read, a page request, or a single network packet to travel from sender to receiver. Throughput, on the other hand, is the rate at which work gets done over a period of time. It answers "how much can be completed per second?" and is usually measured in units like operations per second or data transferred per second. In a network, throughput is about how much data can be moved per second across the link; in a server, it's about how many requests or transactions can be processed each second. These metrics can vary independently. You can have low latency but low throughput if every operation is fast but the system handles only a few of them per second. Conversely, you can have high throughput but high latency if many operations are processed quickly in aggregate, but each individual operation takes longer due to batching or queuing. In networks, the maximum data rate (bandwidth) sets an upper bound, but actual throughput may be lower because of overhead and contention. In storage, latency refers to access time for a single read/write, while throughput refers to how much data you can move per second. Understanding both helps you pinpoint whether users are experiencing delays per request (latency) or a limit on overall capacity (throughput).

8. Which of the following describes the periodic doubling of transistor counts used to estimate technology development pace?

- A. Moore's Law**
- B. Ohm's Law
- C. Boyle's Law
- D. Pascal's Principle

The idea described here is Moore's Law. It captures the observation that the number of transistors on integrated circuits tends to double roughly every two years, which has historically driven faster computing and lower cost per transistor. This doubling pace has been used as a gauge of how quickly technology development in semiconductors progresses, shaping expectations for performance improvements and device capabilities over time. While the exact rate has varied and may be slowing as physical limits loom, the core concept remains that increasing transistor density enables more powerful and affordable electronics. Why the other ideas don't fit: Ohm's Law is about the relationship between voltage, current, and resistance in electrical circuits. Boyle's Law describes how pressure and volume relate for a gas at constant temperature. Pascal's Principle concerns how pressure is transmitted in fluids. None of these describe the growth pattern of transistor counts over time.

9. The _____ computer creates images on your computer.

A. GPU

B. CPU

C. RAM

D. ROM

Rendering images on a computer is handled by a processor built to handle graphics efficiently: the GPU. It is designed to perform many calculations in parallel, which is essential for converting 3D models, textures, and lighting into the pixels you see on screen. The GPU's numerous cores can work on thousands of shading and rasterization tasks at once, delivering smooth visuals, video rendering, and fast image generation. The CPU, while versatile and capable of a wide range of tasks, is optimized for general computing rather than heavy parallel graphics workloads, so it's not as efficient at the core job of rendering images. RAM is the fast memory that holds data the computer actively uses, but it doesn't create images by itself. ROM stores firmware and basic instructions that boot up the system, not real-time graphics output. That combination makes the GPU the correct component for creating images on your computer.

10. What is the role of an operating system's kernel?

A. Renders the User Interface

B. Core Component That Manages Hardware Resources and Provides Low-Level Services to Software

C. Manages Network Routing

D. Houses User Data

The kernel is the central manager of an operating system, sitting between hardware and software. Its main job is to manage hardware resources and provide low-level services to software. It schedules CPU time so programs run smoothly, allocates and protects memory so one process doesn't corrupt another, and handles input/output with devices through drivers. It also processes system calls from applications, responds to hardware interrupts, and coordinates communication between processes. All of these core services let higher-level software run without needing to know the details of the hardware. Rendering the user interface is handled by graphical subsystems and user-space programs, not by the kernel itself. While the kernel supports networking and includes networking code, routing decisions and network management are typically handled by additional software in the network stack and user-space daemons rather than by the kernel's primary role. Storing and organizing user data is the job of the file system and storage infrastructure, which rely on the kernel's mechanisms but aren't simply the kernel's function.

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://cgsconcepts.examzify.com>

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

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