

INTERNET OF THINGS (IOT102) PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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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. A message offering a free biscotti with any purchase illustrates which marketing approach?**
 - A. Permission marketing
 - B. Customer relationship management
 - C. Location-based advertising
 - D. M-commerce

- 2. To increase the current through a resistor, which action would be effective?**
 - A. Increase the resistance
 - B. Decrease the voltage
 - C. Increase the voltage
 - D. Increase the room temperature

- 3. What are the two main types of Arduino pins?**
 - A. Digital and analog.
 - B. Digital and modulation.
 - C. Pulse and analog.
 - D. Analog and digital.

- 4. Which identifier is commonly used to distinguish devices connected to the Internet?**
 - A. Gateway address
 - B. IP address
 - C. Device name
 - D. URL

- 5. CRM stands for what?**
 - A. Customer Research Management
 - B. Customer Relationship Management
 - C. Customized Research Management
 - D. Customer Research Metrics

- 6. Which statement is true about ZigBee networks?**
- A. It is designed for small-scale, low-power networks
 - B. It uses high data rates
 - C. It requires constant power
 - D. It is designed for long-range high bandwidth
- 7. Phones act as actuators too.**
- A. True
 - B. False
 - C. Sometimes
 - D. Not necessarily
- 8. When you have a potential IoT idea you want to develop properly, what must you first define?**
- A. Problem it sets out to solve
 - B. Its Unique Value Proposition
 - C. How it will work
 - D. Route to market
- 9. Which set of terms represents the Big Data descriptors as coined by IBM?**
- A. Vast, Velocity, Variance, Verified
 - B. Speed, True, Diversity, Amount
 - C. Volume, Velocity, Variety, Veracity
 - D. Mass, Velocity, Variety, Validity
- 10. Which term is used to describe analyzing strengths, weaknesses, opportunities, and threats?**
- A. Balanced Scorecard
 - B. SWOT Analysis
 - C. Strategy Map
 - D. BCG Matrix

Answers

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

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Explanations

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1. A message offering a free biscotti with any purchase illustrates which marketing approach?

- A. Permission marketing
- B. Customer relationship management**
- C. Location-based advertising
- D. M-commerce

Strengthening customer relationships through incentives to encourage repeat purchases is at the heart of customer relationship management. CRM focuses on ongoing interactions with customers, using offers and rewards to keep them engaged and loyal. A message that offers a free biscotti with any purchase is a loyalty-style incentive aimed at rewarding customers and encouraging them to return, which directly supports building a long-term relationship with the customer. While permission marketing, location-based advertising, or m-commerce each have their own uses, this scenario centers on fostering ongoing engagement and loyalty with existing or potential customers, which is why it fits CRM best.

2. To increase the current through a resistor, which action would be effective?

- A. Increase the resistance
- B. Decrease the voltage
- C. Increase the voltage**
- D. Increase the room temperature

The relationship between current, voltage, and resistance is described by $I = V / R$. For a resistor with fixed resistance, increasing the voltage raises the current proportionally, because more voltage pushes more charge through the same amount of resistance. So turning up the voltage effectively increases current. Increasing the resistance would reduce current, and decreasing the voltage would also reduce current. Temperature changes can alter resistance, but raising room temperature typically increases resistance for many common resistors, which would not help to increase current.

3. What are the two main types of Arduino pins?

- A. Digital and analog.**
- B. Digital and modulation.
- C. Pulse and analog.
- D. Analog and digital.

Pins on an Arduino are categorized into digital and analog. Digital pins work as on/off channels—you set them HIGH or LOW and use them for simple binary signals like turning an LED on or off or reading a button. Analog pins, on the other hand, read varying voltages through the board's analog-to-digital converter, letting you measure sensors whose output isn't just on or off. They typically give a numeric value corresponding to the voltage you feed in (for example, a 10 bit scale from 0 to 1023 on many boards). Some boards also allow using analog pins as digital pins when extra I/O is needed, but their primary role is to read analog signals.

4. Which identifier is commonly used to distinguish devices connected to the Internet?

- A. Gateway address
- B. IP address**
- C. Device name
- D. URL

On the Internet, every device is identified by an IP address, which serves as the unique routing label used by routers to deliver packets to the correct destination. This numerical address is what enables data to flow from one device to another across interconnected networks, whether the device uses IPv4 or IPv6, and whether it sits behind a private network or is reachable publicly. Human-friendly names or URLs do not function as the actual routing identifiers; names are translated to IP addresses by DNS before any data can be sent. A gateway address refers to the router's address on a local network, not the individual device's global identity. A device name is useful for humans but isn't guaranteed to be unique across networks, and a URL points to a resource on the Web, not to the device itself. Thus, the IP address is the standard, widely used identifier that distinguishes devices on the Internet.

5. CRM stands for what?

- A. Customer Research Management
- B. Customer Relationship Management**
- C. Customized Research Management
- D. Customer Research Metrics

CRM stands for Customer Relationship Management, which is about how a business manage interactions with customers throughout their lifecycle. It's both the philosophy and the technology that bring sales, marketing, and customer service together so you can track who your customers are, what they've bought or asked for, and how they've been engaged. The goal is to build better relationships, improve satisfaction and loyalty, and ultimately drive more sales. In practice, a CRM system stores contact details, track communication history, manage sales opportunities, log service requests, and coordinate marketing campaigns, giving a single view of the customer. The other terms aren't used in the same sense: they would suggest managing research activities or measuring research results about customers, rather than actively managing the ongoing relationships and interactions across touchpoints. In IoT contexts, a CRM helps connect device usage and service needs to individual customers, enabling proactive support and personalized experiences.

6. Which statement is true about ZigBee networks?

- A. It is designed for small-scale, low-power networks**
- B. It uses high data rates
- C. It requires constant power
- D. It is designed for long-range high bandwidth

ZigBee is built for low-power, low-data-rate wireless personal area networks. Devices can stay asleep most of the time and wake only to send small bursts of data, which keeps battery life long and suitable for sensors and simple control nodes. The data rate is modest—around 250 kbps in the 2.4 GHz band—enough for occasional status updates or control messages, but not for high-bandwidth traffic like video or large file transfers. It also supports many devices and flexible topologies (like mesh or tree) to cover a local area, but the practical range is typically tens to a few hundred meters depending on obstacles. It doesn't require constant power, and it isn't designed for long-range, high-bandwidth communications. So, the best-fit description is that ZigBee networks are designed for small-scale, low-power operation.

7. Phones act as actuators too.

- A. True
- B. False
- C. Sometimes
- D. Not necessarily

Actuation means turning electrical energy into a physical action that affects the real world. A phone does this through built in actuators: the vibration motor provides tactile feedback, the speaker emits sound, and even the flash or screen actions can create physical or perceptible effects. Because these outputs are physical actions driven by electronics, a phone can act as an actuator in an IoT sense, not just a sensor or controller. So saying phones act as actuators is correct, since they produce real-world effects in response to signals or commands.

8. When you have a potential IoT idea you want to develop properly, what must you first define?

- A. Problem it sets out to solve
- B. Its Unique Value Proposition
- C. How it will work
- D. Route to market

Defining the problem you want to solve is the first thing to establish when developing an IoT idea. This anchors what you build, what data you collect, and what success looks like, ensuring every later choice serves a real need. If you skip this, you risk building features without value or misjudging costs and feasibility. After the problem is clear, you can articulate why your solution matters (the value you provide), then work out how the system will operate and how you'll reach customers, but those steps depend on understanding the problem first.

9. Which set of terms represents the Big Data descriptors as coined by IBM?

- A. Vast, Velocity, Variance, Verified
- B. Speed, True, Diversity, Amount
- C. Volume, Velocity, Variety, Veracity
- D. Mass, Velocity, Variety, Validity

IBM's four Big Data descriptors are Volume, Velocity, Variety, Veracity. Volume captures the enormous scale of data generated from countless sources. Velocity refers to how quickly data arrives and must be processed, often in real time or near real time. Variety highlights the many different data types and formats, from structured records to unstructured text, audio, and sensor streams. Veracity addresses data quality and trust, acknowledging that data can be noisy, incomplete, or uncertain and still useful with proper management and validation. Other options use similar ideas with different words, but they aren't the IBM terms. For example, Vast or Mass isn't the standard IBM term for the amount of data, and Variance or Validity aren't the IBM descriptors either. Speed and True, Diversity and Amount mix acceptable synonyms but don't match the IBM four exactly. The pairings that fit IBM's set are Volume, Velocity, Variety, Veracity.

10. Which term is used to describe analyzing strengths, weaknesses, opportunities, and threats?

A. Balanced Scorecard

B. SWOT Analysis

C. Strategy Map

D. BCG Matrix

The concept being tested is using a SWOT analysis to evaluate internal capabilities and the external environment. SWOT stands for strengths and weaknesses (internal factors) and opportunities and threats (external factors). This framework helps you see what the organization does well, where it needs improvement, what external chances it can capitalize on, and what external risks it should guard against. By weighing these elements, you can identify strategic options such as leveraging strengths to seize opportunities or addressing weaknesses to reduce exposure to threats. Why this term fits better than the others: a Balanced Scorecard translates strategy into measurable performance metrics across different perspectives; a Strategy Map visually links strategic objectives and how they influence each other; and the BCG Matrix analyzes product lines or business units based on market growth and market share to guide resource allocation. None of these focus on systematically analyzing strengths, weaknesses, opportunities, and threats together like SWOT does.

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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://iot102.examzify.com>

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

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