Western Governors University (WGU) ITEC2114 D337 Internet of Things (IoT) and Infrastructure Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

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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

1. **How does the FTC ensure companies meet cybersecurity standards?**

   A. By providing grants for improved cybersecurity

   B. By conducting random cybersecurity inspections

   C. By levying penalties against non-compliant companies

   D. By offering free cybersecurity training

2. **What does the FDA (Food and Drug Administration) primarily oversee?**

   A. Agricultural practices

   B. Health care delivery

   C. Food and drug safety

   D. Environmental protection

3. **What type of deployment is SigFox suitable for?**

   A. Wide area communications

   B. Dense urban environments

   C. Remote monitoring

   D. Local area networks

4. **What does decentralization in a blockchain context refer to?**

   A. Having one entity control the network

   B. A peer-to-peer structure that enhances security

   C. Centralized data storage management

   D. Elimination of all nodes in the network

5. **What does the term VNF stand for in the context of network functions?**

   A. Virtual Network Function

   B. Variable Namespace Framework

   C. Visual Network Facility

   D. Virtual Node Functionality

6. Which country practices cyber sovereignty, controlling internet activities within its borders?

A. Russia

B. China

C. India

D. United States

7. What is the defining characteristic of The Blockchain?

A. A centralized database for transaction records

B. A trustless environment enabling secure transactions

C. An application for managing user data across devices

D. A platform for social media analysis

8. What is considered the best method to protect information when using IoT devices?

A. Data Aggregation

B. Encryption

C. Access Control

D. Firewall Protection

9. Which aspect of blockchain technology helps ensure data integrity?

A. Centralization of data

B. Transactional transparency

C. Immutability of transactions

D. Use of smart contracts

10. What is the primary function of a Phasor Measurement Unit (PMU)?

A. To provide location services for IoT devices

B. To monitor devices and cache information for daily consumption

C. To manage network traffic for virtual machines

D. To authenticate users in a blockchain system

Answers

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

Explanations

1. How does the FTC ensure companies meet cybersecurity standards?

A. By providing grants for improved cybersecurity

B. By conducting random cybersecurity inspections

C. By levying penalties against non-compliant companies

D. By offering free cybersecurity training

The Federal Trade Commission (FTC) plays a key role in protecting consumer privacy and ensuring that companies adhere to established cybersecurity standards. One of the primary ways the FTC ensures compliance is by levying penalties against companies that fail to meet these standards. This enforcement mechanism encourages organizations to implement sufficient security measures to protect consumer data and adhere to recognized best practices in cybersecurity. When the FTC identifies that a company has engaged in unfair or deceptive practices related to cybersecurity, it can impose fines or other penalties to hold the company accountable. This not only serves as a deterrent for other businesses but also reinforces the importance of maintaining robust cybersecurity protocols. Through these actions, the FTC helps promote a culture of compliance and responsibility within the industry. While other choices may have their own merits in the context of cybersecurity, they do not reflect the core enforcement role of the FTC in ensuring companies meet cybersecurity standards. For instance, providing grants, conducting random inspections, or offering training, while beneficial, do not have the same direct enforcement power as penalties against non-compliant companies.

2. What does the FDA (Food and Drug Administration) primarily oversee?

A. Agricultural practices

B. Health care delivery

C. Food and drug safety

D. Environmental protection

The FDA (Food and Drug Administration) primarily oversees food and drug safety, ensuring that food products are safe for consumption and that drugs are effective and safe for use in humans. This includes the regulation of food additives, dietary supplements, vaccines, blood products, and pharmaceuticals. The agency conducts inspections, assesses clinical research, oversees the approval process for new drugs and medical devices, and monitors products once they are on the market to ensure ongoing safety and efficacy. While the FDA may have some involvement in aspects related to health care delivery and agricultural practices (such as overseeing the safety and labeling of food products), its core mission revolves around protecting public health by regulating what people consume and use as medications. Environmental protection is primarily outside the FDA's scope, usually falling under the purview of agencies like the Environmental Protection Agency (EPA). Therefore, the focus on food and drug safety accurately reflects the primary responsibilities of the FDA.

3. What type of deployment is SigFox suitable for?

A. Wide area communications

B. Dense urban environments

C. Remote monitoring

D. Local area networks

SigFox is primarily designed for wide area network (WAN) communications, making it highly suitable for applications that require connectivity over large distances. This technology operates using a low power, low bandwidth communication protocol that is ideal for transmitting small packets of data from Internet of Things (IoT) devices. While SigFox can indeed effectively function in dense urban environments due to its ability to penetrate urban barriers and manage numerous connections, its main strength lies in providing extensive coverage for devices spread over wide geographical areas. This positioning allows for efficient remote monitoring, where devices may be located in sparsely populated regions and still able to communicate effectively without needing significant power or bandwidth. Understanding SigFox's technology helps clarify its suitability for applications such as remote monitoring, where sensor data may be sent from locations that are remote or difficult to access, further underscoring its robust capability for wide area communications. Hence, while dense urban environments support SigFox's capabilities, the broader application of SigFox lies in wide area communications, primarily best serving scenarios where connectivity spans large distances with minimal energy consumption.

4. What does decentralization in a blockchain context refer to?

A. Having one entity control the network

B. A peer-to-peer structure that enhances security

C. Centralized data storage management

D. Elimination of all nodes in the network

Decentralization in a blockchain context refers to a peer-to-peer structure that enhances security. This configuration allows multiple nodes or participants in the network to maintain their own copies of the blockchain, making it more resistant to attacks or failures. Each participant, or node, has equal authority and responsibility, which helps prevent any single point of failure or control. This characteristic is fundamental to the security and integrity of the blockchain, as it ensures that no single entity can manipulate or corrupt the data without the consensus of the entire network. In contrast, having one entity control the network undermines the foundational principles of blockchain technology; centralization can introduce vulnerabilities and distrust. Additionally, centralized data storage management poses risks associated with data breaches and loss of control. The concept of eliminating all nodes in the network directly contradicts the idea of a decentralized system, as nodes are essential for maintaining the distributed ledger system that defines blockchain technology.

5. What does the term VNF stand for in the context of network functions?

A. Virtual Network Function

B. Variable Namespace Framework

C. Visual Network Facility

D. Virtual Node Functionality

The term VNF stands for Virtual Network Function, which is a crucial concept in the realm of network virtualization. VNFs are software implementations of network functions that traditionally ran on dedicated hardware. By virtualizing these functions, organizations can run them on standard hardware or in cloud environments, leading to increased flexibility, scalability, and efficiency in managing network services. An important aspect of VNFs is that they enable the decoupling of network functions from physical devices, allowing for more agile network management and deployment. This supports the principles of Software-Defined Networking (SDN) and Network Functions Virtualization (NFV), which aim to drive down costs and enhance the ability to adapt to changing network demands. The other options provided do not reflect established terminology in networking or virtualization. Understanding VNFs is essential for grasping how modern networks operate and evolve, especially as businesses move toward more dynamic and scalable network architectures.

6. Which country practices cyber sovereignty, controlling internet activities within its borders?

A. Russia

B. China

C. India

D. United States

The concept of cyber sovereignty refers to a nation's ability to control internet activities and cyber infrastructure within its own borders. China is a prominent example of a country that actively practices cyber sovereignty. The Chinese government exercises extensive control over the internet through strict regulations, censorship, and monitoring of online activities, aiming to maintain national security and social stability. This approach is evident in policies such as the Great Firewall, which limits access to foreign websites and content deemed undesirable by the state. This practice is designed to ensure that internet use aligns with the country's political and cultural values. China's emphasis on cyber sovereignty is a key part of its broader strategy to maintain authority over information, manage social discourse, and limit foreign influence on its citizens. Thus, the characterization of China as a country that practices cyber sovereignty is accurate and reflects its ongoing efforts to regulate and control its digital landscape.

7. What is the defining characteristic of The Blockchain?

A. A centralized database for transaction records

B. A trustless environment enabling secure transactions

C. An application for managing user data across devices

D. A platform for social media analysis

The defining characteristic of blockchain technology is its ability to create a trustless environment that enables secure transactions. Blockchain operates as a distributed ledger, where each transaction is recorded on multiple nodes in the network. This decentralization eliminates the need for a central authority or intermediary, allowing participants to transact directly with one another while maintaining transparency and security. In a trustless environment, users can verify the authenticity and integrity of transactions through cryptographic hashes and consensus mechanisms without needing to rely on a single party. This is crucial in various applications, especially in financial services, where trust is a critical component of transactions. The inherent security of blockchain comes from its design, where altering any single block would require changing all subsequent blocks, thus preventing tampering and fraud. The other options refer to different concepts that do not capture the essence of blockchain. A centralized database for transaction records contrasts with the decentralized nature of blockchain. An application for managing user data across devices might suggest a cloud computing solution rather than a distributed ledger. Lastly, a platform for social media analysis does not relate to the primary function of blockchain technology, which focuses on secure and trustworthy transactions.

8. What is considered the best method to protect information when using IoT devices?

A. Data Aggregation

B. Encryption

C. Access Control

D. Firewall Protection

Encryption is considered the best method to protect information when using IoT devices because it transforms data into a format that is unreadable to unauthorized users. This ensures that even if the data is intercepted during transmission or accessed on the device, it cannot be understood without the correct decryption key. Given the vulnerabilities inherent in many IoT devices, especially those connected to the internet, encryption provides a crucial layer of security that helps maintain the confidentiality and integrity of sensitive data. While other methods, such as access control, data aggregation, and firewall protection, contribute to a comprehensive security strategy, they are most effective when used in conjunction with encryption. Access control restricts who can access the data, and firewalls help block unauthorized access to networks, but these measures cannot protect the data itself during transmission. Data aggregation deals with collecting and organizing data, which doesn't inherently provide security for individual pieces of information. On its own, encryption directly addresses the need to secure data itself, making it a fundamental protective measure in the realm of IoT security.

9. Which aspect of blockchain technology helps ensure data integrity?

A. Centralization of data

B. Transactional transparency

C. Immutability of transactions

D. Use of smart contracts

The immutability of transactions is a fundamental aspect of blockchain technology that ensures data integrity. Immutability refers to the property that once data has been recorded in a blockchain, it cannot be altered or deleted without the consensus of the network participants. This characteristic is achieved through the use of cryptographic hashes, which securely link each block in the chain to its predecessor. Any attempt to change a block's information would require recalculating the hashes for not only that block but also all subsequent blocks, making such changes computationally infeasible due to the decentralized nature of the blockchain. This level of security allows stakeholders to trust that the data present on the blockchain is accurate and unchangeable, thereby fostering confidence in its integrity. Data integrity is crucial in applications where trust, security, and accurate tracking of information are paramount, such as financial transactions, supply chain management, and identity verification. While transactional transparency contributes to trustworthiness by allowing participants to see all transactions on the blockchain, it is the immutability that directly addresses the risk of data alteration. Centralization of data contradicts the principles of blockchain by creating a single point of failure, and while smart contracts can automate and enforce agreements on the blockchain, they do not primarily serve to ensure data integrity in

10. What is the primary function of a Phasor Measurement Unit (PMU)?

A. To provide location services for IoT devices

B. To monitor devices and cache information for daily consumption

C. To manage network traffic for virtual machines

D. To authenticate users in a blockchain system

The primary function of a Phasor Measurement Unit (PMU) is to provide real-time monitoring and management of electric power systems. PMUs collect data on electrical waveforms, such as voltage and current, at a granular level across the power grid, which allows operators to analyze the state of the grid quickly and accurately. While option B mentions monitoring, which aligns closely with the function of a PMU, it does simplify the role. It's not only about caching information for daily consumption; the PMU delivers synoptic measurements that help in improving the reliability and performance of power systems. It directly contributes to grid stability by enabling fast data analysis and response, which is crucial for high-voltage transmission monitoring. The other options do not correspond to the functions of a PMU. They involve different areas such as IoT location services, network traffic management, and user authentication in blockchain systems, none of which relate directly to the electric power function and purpose of a PMU.

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://wgu-itec2114d337.examzify.com

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