

## ITF+ Certification Test Bank

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## Bank 1

1. A user can sign in with a password, but their account still cannot open a specific shared folder. Which concept is the password check demonstrating?
  - A. Authentication
  - B. Authorization
  - C. Encryption
  - D. Hashing
2. A technician is asked to protect sensitive data so it is unreadable to anyone without the correct key, but still recoverable by authorized parties. Which control best matches this requirement?
  - A. Hashing
  - B. Encryption
  - C. Firewall rules
  - D. Backups
3. A user reports that web pages load slowly even though a speed test shows high maximum capacity on the connection. Which network factor best explains this “delay” feeling?
  - A. Bandwidth
  - B. LAN
  - C. Latency
  - D. DHCP
4. A home office adds several wired desktops and wants them all connected within the same local network segment. Which device is the best fit for connecting multiple wired systems inside the LAN?
  - A. Router
  - B. Default gateway
  - C. ISP
  - D. Network switch
5. A laptop can reach local devices on the same network but cannot access any internet sites. Which setting is most directly tied to reaching networks outside the local subnet?
  - A. Default gateway
  - B. Subnet mask
  - C. Cookie
  - D. Driver

6. Several devices suddenly receive incorrect network settings automatically, including IP address and DNS servers. Which service is responsible for automatically assigning those settings?
  - A. DNS
  - B. DHCP
  - C. TCP/IP
  - D. Wi-Fi
7. A user can reach a website by typing its IP address, but the site fails when they type the domain name. Which system is most likely involved in this problem?
  - A. ISP
  - B. Router
  - C. DNS
  - D. HTML
8. An organization wants to verify that a file has not been changed since it was created, and they do not need to recover the original content from the check value. Which approach best fits?
  - A. Encryption
  - B. Backup
  - C. MFA
  - D. Hashing
9. A system fails to start because the boot device order needs to be changed before the operating system loads. Where would you most likely adjust this setting?
  - A. BIOS/UEFI
  - B. Operating system
  - C. Application
  - D. SaaS
10. A security analyst wants to classify an incident where customer data was exposed to an unauthorized party. Which CIA triad goal is most directly impacted?
  - A. Integrity
  - B. Confidentiality
  - C. Availability
  - D. Bandwidth

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1. Correct Answer: A. Authentication

Explanation: Authentication is the process of proving an identity, such as using a

password. The scenario describes the sign-in check, which is about identity, not what the user is allowed to access.

2. Correct Answer: B. Encryption

Explanation: Encryption converts readable data into an unreadable form using a key so authorized parties can recover it. Hashing is one-way and is used for integrity checks rather than recovery.

3. Correct Answer: C. Latency

Explanation: Latency is the time delay for data to travel between sender and receiver. The scenario highlights a connection that has high capacity but still feels slow due to delay.

4. Correct Answer: D. Network switch

Explanation: A network switch connects devices within a LAN and forwards traffic to the correct device. A router connects different networks rather than primarily connecting multiple wired devices inside one local segment.

5. Correct Answer: A. Default gateway

Explanation: The default gateway is the router address a device uses to reach networks outside its local subnet. If local access works but internet access fails, the default gateway is a key troubleshooting clue.

6. Correct Answer: B. DHCP

Explanation: DHCP automatically assigns IP configuration settings like IP address, subnet mask, default gateway, and DNS servers. The scenario describes automatic assignment producing incorrect settings, which points to DHCP.

7. Correct Answer: C. DNS

Explanation: DNS translates human-friendly domain names into IP addresses. Being able to reach a site by IP but not by name is a classic sign of name-resolution trouble.

8. Correct Answer: D. Hashing

Explanation: Hashing is a one-way process that creates a fixed-length value that changes if the input changes. The scenario is about checking integrity without needing to recover the original data.

9. Correct Answer: A. BIOS/UEFI

Explanation: BIOS/UEFI initializes hardware and starts the boot process before the operating system loads. Boot order is a common setting controlled in BIOS/UEFI.

10. Correct Answer: B. Confidentiality

Explanation: Confidentiality focuses on keeping data secret from unauthorized disclosure. The scenario describes exposure of customer data to an unauthorized party, which is a confidentiality impact.

## Bank 2

1. A user clears their browser and notices they must sign in again and their site preferences are gone. What was most likely removed that helped the website remember session state and preferences?
  - A. Cookie
  - B. URL
  - C. HTML
  - D. Bandwidth
2. A user needs to evaluate whether a web link is likely legitimate before clicking it, focusing on the protocol, domain, and path. Which item are they inspecting?
  - A. ISP
  - B. URL
  - C. RAM
  - D. SaaS
3. A student is learning that network speeds are often measured in bits per second, while file sizes are often measured in bytes. Which distinction best matches this idea?
  - A. LAN vs ISP
  - B. TCP/IP vs DNS
  - C. Bit vs Byte
  - D. BIOS/UEFI vs OS
4. A computer becomes sluggish when many applications are open at once, but the CPU is not maxed out. Which hardware resource is most likely constrained in this scenario?
  - A. RAM
  - B. Subnet mask
  - C. Router
  - D. Driver
5. A company wants an easy security improvement that adds “something you have” to password sign-in for remote access accounts. Which control best matches this?
  - A. Firewall
  - B. Multi-factor authentication (MFA)
  - C. Hashing
  - D. Algorithm

6. A help desk analyst suspects the operating system cannot communicate correctly with a new printer that was just installed. What is the most likely missing component?
  - A. Patch management
  - B. Device driver
  - C. Database
  - D. DHCP
7. A user receives an email that urges immediate action and directs them to a fake login page to capture credentials. What type of attack is this?
  - A. Malware
  - B. Phishing
  - C. Virtualization
  - D. TCP/IP
8. A device can reach other systems on the local network but fails to reach the internet because it cannot identify what portion of the IP address is the network versus the host. Which configuration item is most directly involved?
  - A. Subnet mask
  - B. Default gateway
  - C. DNS
  - D. Firewall
9. A small business wants employees to use a complete office productivity application through a web browser, with the provider managing the application itself. Which cloud model best fits?
  - A. Virtualization
  - B. Operating system
  - C. Software as a Service (SaaS)
  - D. Database
10. A user wants a structured approach to diagnosing a recurring connectivity problem and wants to avoid making multiple changes at once without testing. What concept best fits?
  - A. Troubleshooting methodology
  - B. Cyber hygiene
  - C. Algorithm
  - D. Application

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1. Correct Answer: A. Cookie

Explanation: A cookie is small data stored in a browser that helps a website remember session state and preferences. Clearing the browser commonly removes cookies, which can force sign-ins again.

2. Correct Answer: B. URL

Explanation: A URL is the address used to locate a resource on the web, including protocol, domain, and path. Evaluating a link for legitimacy often starts by inspecting the URL structure.

3. Correct Answer: C. Bit vs Byte

Explanation: A bit is a single zero or one, while a byte is typically eight bits and is used for measuring file sizes and storage. The exam commonly tests this because network speeds and file sizes use different units that are easy to confuse.

4. Correct Answer: A. RAM

Explanation: RAM is short-term working memory used to run programs and hold active data temporarily. Opening many applications can exhaust RAM and cause sluggish performance even if the CPU is not fully utilized.

5. Correct Answer: B. Multi-factor authentication (MFA)

Explanation: MFA requires two or more different authentication factors, such as a password plus a code or device. Adding “something you have” strengthens account protection beyond passwords alone.

6. Correct Answer: B. Device driver

Explanation: A device driver allows the operating system to communicate correctly with specific hardware. New hardware that does not work properly often points to a missing or incorrect driver.

7. Correct Answer: B. Phishing

Explanation: Phishing is a social engineering attack that tricks users into revealing sensitive information through messages and fake sites. The scenario describes a credential-harvesting email and a fake login page, which is classic phishing.

8. Correct Answer: A. Subnet mask

Explanation: A subnet mask determines which part of an IP address is the network portion and which part is the host portion. If that boundary is wrong, connectivity beyond the correct network scope can fail even when an IP address appears valid.

9. Correct Answer: C. Software as a Service (SaaS)

Explanation: SaaS delivers a complete application over the internet and the provider

manages the application platform. Using office tools through a browser with provider-managed software aligns with SaaS.

10. Correct Answer: A. Troubleshooting methodology

Explanation: A troubleshooting methodology is a structured approach to diagnosing and fixing problems in a controlled way. The scenario emphasizes process discipline and testing changes rather than guessing, which matches a methodology.

## Bank 3

1. A user is entering credentials on a public Wi-Fi network and wants the safest choice for the login page connection so the traffic is encrypted in transit. Which option best fits?
  - A. FTP
  - B. HTML
  - C. Cookie
  - D. HTTPS
2. An organization wants to store a value that proves whether a file changed, and they do not need to recover the original content from that value. Which approach best fits?
  - A. Encryption
  - B. Backup
  - C. Hashing
  - D. Firewall
3. A help desk technician suspects a user cannot reach a specific service because traffic is being blocked based on network rules. Which control most directly matches this behavior?
  - A. Firewall
  - B. Router
  - C. DNS
  - D. Subnet mask
4. A company learns a widely used program has a security vulnerability and wants a disciplined way to apply updates to reduce risk. Which practice best matches this need?
  - A. Virtualization
  - B. Patch management
  - C. Database
  - D. Algorithm
5. A user reports that all their documents suddenly became unreadable and a message demands payment to restore access. What type of threat is most consistent with this scenario?
  - A. Phishing
  - B. Malware

- C. Social engineering
- D. Ransomware

6. A small office wants a device that can connect its internal network to the internet and direct traffic between the two networks. Which device best fits?

- A. Network switch
- B. LAN
- C. Router
- D. Default gateway

7. A school lab connects computers and printers within one building and wants a term for that limited-area network. Which term is best?

- A. ISP
- B. Local Area Network (LAN)
- C. TCP/IP
- D. URL

8. A student is asked which foundational protocol suite supports addressing and reliable delivery of data across networks. Which choice best matches?

- A. TCP/IP
- B. HTML
- C. DNS
- D. SaaS

9. A company uses a complete application through a browser, and the provider manages the application itself rather than the user installing it locally. Which model best fits?

- A. Operating system
- B. Application (software)
- C. Virtualization
- D. Software as a Service (SaaS)

10. A database field is being set up to store values like “true/false” or “yes/no,” and another field must store text rather than numbers to avoid calculation issues. What concept determines the kind of value each field should hold?

- A. Database
- B. Function
- C. Data type
- D. Binary

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1. Correct Answer: D. HTTPS

Explanation: HTTPS is HTTP protected with encryption and authentication, typically using TLS. It is the safer choice for logins and sensitive data compared to unprotected connections.

2. Correct Answer: C. Hashing

Explanation: Hashing is a one-way process used to create a value that changes when the input changes. It is used for integrity checks rather than recovering the original content.

3. Correct Answer: A. Firewall

Explanation: A firewall filters network traffic based on rules, allowing some connections and blocking others. The scenario describes rule-based blocking of traffic, which matches a firewall.

4. Correct Answer: B. Patch management

Explanation: Patch management is the process of acquiring, testing, and installing updates that fix bugs or security vulnerabilities. The scenario is specifically about handling updates to reduce vulnerability risk in a disciplined way.

5. Correct Answer: D. Ransomware

Explanation: Ransomware encrypts files or locks systems and demands payment to restore access. The sudden unreadable documents and ransom demand align directly with ransomware.

6. Correct Answer: C. Router

Explanation: A router connects different networks and directs traffic between them, such as a LAN and the internet. That role matches the need to connect the internal office network to the outside network.

7. Correct Answer: B. Local Area Network (LAN)

Explanation: A LAN connects devices within a limited area such as a building, home, or office. The school lab scenario is a classic limited-area network.

8. Correct Answer: A. TCP/IP

Explanation: TCP/IP is the foundational suite of networking protocols used for addressing, routing, and reliable delivery of data across networks. The question describes that foundational role directly.

9. Correct Answer: D. Software as a Service (SaaS)

Explanation: SaaS delivers a complete application over the internet and the provider

manages the application. Using the application through a browser with provider-managed software aligns with SaaS.

10. Correct Answer: C. Data type

Explanation: A data type defines what kind of value a variable or field can hold, such as Boolean, integer, or string. The scenario is about selecting the correct kind of stored value for fields, which is a data type decision.

## Bank 4

1. A student creates a step-by-step set of instructions to diagnose a recurring issue and wants to represent the decision points clearly. What term best matches a step-by-step instruction set used to solve a problem?
  - A. Algorithm
  - B. Database
  - C. Driver
  - D. Cookie
2. A user needs to transfer files between two systems, but the method being considered is known for lacking strong built-in encryption by default. Which protocol best matches that description?
  - A. HTTPS
  - B. FTP
  - C. DNS
  - D. TCP/IP
3. A beginner programmer combines two conditions and only wants an action to occur when both are true. Which concept best matches combining conditions like AND and OR to get a true/false result?
  - A. Function
  - B. Data type
  - C. Logical operator
  - D. Virtualization
4. A user can access the internet by name and IP, but specific traffic to a service keeps failing because it is filtered by rule. Which control best matches filtering traffic based on rules to allow or block connections?
  - A. Router
  - B. Network switch
  - C. DHCP
  - D. Firewall
5. A user installs a new graphics card and the operating system cannot communicate correctly with it, causing display issues. Which software component most directly enables the operating system to work with that hardware?
  - A. Driver (device driver)
  - B. HTML

- C. URL
- D. Folder (directory)

6. A computer is slow when many programs are open, and the symptom points to short-term working memory being exhausted rather than a CPU issue. Which component is most likely constrained?

- A. CPU (Central Processing Unit)
- B. RAM (Random Access Memory)
- C. BIOS/UEFI
- D. ISP (Internet Service Provider)

7. A website is loading, but the user's goal is to understand which language controls the structure of the page content such as headings and paragraphs. Which term best matches the markup language that structures web pages?

- A. HTTPS
- B. Wi-Fi
- C. HTML (Hypertext Markup Language)
- D. Encryption

8. An organization wants to reduce everyday security risk using routine habits like updating systems and using strong authentication. Which term best fits this routine-practices idea?

- A. Virtualization
- B. Application (software)
- C. Cloud computing
- D. Cyber hygiene

9. A security incident report says customer records were altered without permission, but the systems were still online and accessible. Which CIA triad goal is most directly impacted?

- A. Integrity
- B. Availability
- C. Confidentiality
- D. Bandwidth

10. A team wants to run multiple virtual machines on one physical computer to test different environments without buying more hardware. Which concept best matches creating virtual versions of computing resources?

- A. Malware
- B. Virtualization

C. LAN

D. Subnet mask

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1. Correct Answer: A. Algorithm

Explanation: An algorithm is a step-by-step set of instructions used to solve a problem or complete a task. It commonly shows up when selecting the correct order of actions or identifying where a process breaks.

2. Correct Answer: B. FTP

Explanation: FTP is used to transfer files between systems over a network and is traditionally not strongly encrypted by default. It often appears in questions contrasting secure versus insecure transfer choices.

3. Correct Answer: C. Logical operator

Explanation: A logical operator combines conditions like AND, OR, and NOT to produce a true or false result. The scenario is about requiring both conditions to be true, which is exactly a logical operator use case.

4. Correct Answer: D. Firewall

Explanation: A firewall filters network traffic based on rules, allowing approved connections and blocking others. The question describes rule-based filtering causing a service to fail, which aligns with a firewall.

5. Correct Answer: A. Driver (device driver)

Explanation: A device driver is software that lets the operating system communicate correctly with specific hardware. New hardware not working properly commonly points to installing, updating, or correcting a driver.

6. Correct Answer: B. RAM (Random Access Memory)

Explanation: RAM is short-term working memory used to run programs and hold active data temporarily. When many applications are open and the system slows, low RAM is a common cause described in the material.

7. Correct Answer: C. HTML (Hypertext Markup Language)

Explanation: HTML is used to structure content on web pages using elements such as headings and paragraphs. The scenario asks specifically about page structure, which is HTML's role in the provided material.

8. Correct Answer: D. Cyber hygiene

Explanation: Cyber hygiene refers to routine practices that reduce everyday security

risk, such as updating systems and using strong authentication. The scenario describes routine baseline habits, matching cyber hygiene.

9. Correct Answer: A. Integrity

Explanation: Integrity focuses on keeping data correct and preventing unauthorized changes. The scenario is about records being altered without permission while systems remain accessible, which points to integrity rather than availability.

10. Correct Answer: B. Virtualization

Explanation: Virtualization is using software to create virtual versions of resources, such as running multiple virtual machines on one physical computer. The scenario describes that exact use of virtual machines for testing environments.

## Bank 5

1. A technician wants a structured way to diagnose a problem without making multiple changes at once and losing track of what fixed it. Which concept best matches this disciplined, step-by-step approach?
  - A. Troubleshooting methodology
  - B. Algorithm
  - C. Patch management
  - D. Firewall
2. A user's files were corrupted after an incident, and the organization wants to restore them using stored copies created earlier. Which term best matches the stored copy used for restoration?
  - A. Hashing
  - B. Backup
  - C. Encryption
  - D. Cookie
3. A workstation can access a web server when the user types the server's IP address, but it fails when the user types the domain name. Which system is most likely involved?
  - A. DHCP
  - B. Default gateway
  - C. DNS
  - D. Subnet mask
4. A small office needs to connect multiple wired devices inside one local network so they can communicate efficiently within that LAN. Which device is the best fit?
  - A. Router
  - B. ISP
  - C. BIOS/UEFI
  - D. Network switch
5. A user enters a password to prove who they are before any access decisions are made. Which security concept is being performed?
  - A. Authentication
  - B. Authorization
  - C. Confidentiality
  - D. Integrity

6. A device has a valid IP address but cannot correctly determine which part identifies the network versus the host, causing connectivity issues even though the address "looks right." Which configuration item is most directly involved?
  - A. DNS
  - B. Subnet mask
  - C. URL
  - D. Cookie
7. A team needs a one-way method to verify whether a file has been altered, and they do not need to recover the original content from the check value. Which approach best fits?
  - A. Encryption
  - B. Backup
  - C. Hashing
  - D. MFA
8. A user asks which core software manages hardware resources and provides services for applications like file management and permissions. Which term best matches?
  - A. Application (software)
  - B. Driver (device driver)
  - C. BIOS/UEFI
  - D. Operating system (OS)
9. A company wants routine practices that reduce everyday risk, such as keeping systems updated and using strong sign-in protections. Which term best fits this set of habits?
  - A. Cyber hygiene
  - B. Virtualization
  - C. Database
  - D. HTML
10. An organization uses a complete application through a web browser, and the provider manages the application itself. Which model best fits?
  - A. Cloud computing
  - B. Software as a Service (SaaS)
  - C. Local Area Network (LAN)
  - D. TCP/IP

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1. Correct Answer: A. Troubleshooting methodology

Explanation: A troubleshooting methodology is a structured approach to diagnosing and fixing problems in a controlled way. It shows up as “best next step” choices where process discipline beats guessing or changing many things at once.

2. Correct Answer: B. Backup

Explanation: A backup is a stored copy of data used to restore files after loss or corruption. The scenario describes restoration from earlier stored copies, which matches backups.

3. Correct Answer: C. DNS

Explanation: DNS translates human-friendly names into IP addresses. Reaching a site by IP but not by name points to name-resolution trouble tied to DNS.

4. Correct Answer: D. Network switch

Explanation: A network switch connects devices within a LAN and forwards traffic to the correct device. The scenario is about connecting multiple wired devices inside one local network segment, which is a switch’s role.

5. Correct Answer: A. Authentication

Explanation: Authentication is the process of proving an identity, such as using a password. The scenario is about identity proof before any permission decision, which matches authentication.

6. Correct Answer: B. Subnet mask

Explanation: A subnet mask defines which part of an IP address is the network portion and which part is the host portion. The scenario describes confusion at that boundary causing connectivity issues, which aligns with the subnet mask.

7. Correct Answer: C. Hashing

Explanation: Hashing is a one-way process that creates a fixed-length value that changes if the input changes. The scenario is about integrity checking without recovery, which is what hashing supports.

8. Correct Answer: D. Operating system (OS)

Explanation: An operating system manages hardware resources and provides services for applications, including file management. The question describes those core responsibilities, which match the OS definition.

9. Correct Answer: A. Cyber hygiene

Explanation: Cyber hygiene is the routine set of practices that reduce everyday

security risk, like updating systems and using strong authentication. The scenario describes routine baseline habits, which fits cyber hygiene.

10. Correct Answer: B. Software as a Service (SaaS)

Explanation: SaaS delivers a complete application over the internet and the provider manages the application itself. Using the application through a browser with provider-managed software aligns with SaaS.