Question 1

Correct

Mark 2.00 out of 2.00

⚑ Flag question

What is a way that blockchain can help in the field of IoT?

Select one:

○ It can prevent device tampering.

○ It can provide a secure transaction without cryptography.

○ It can protect the operating system of the IoT device.

◉ It can track sensor data measurements and prevent malicious data.   ✔

Refer to curriculum topic: 6.3.2
Blockchain can be useful in several ways for the IoT:

- Blockchain can track sensor data measurements and prevent malicious data.
- It can provide IoT device identification, authentication, and secure data transfer.
- IoT sensors can exchange data directly with each other securely and without the need for an intermediary.
- A distributed ledger eliminates a single source of failure within the IoT ecosystem.
- IoT deployment is simplified and operation costs of IoT are reduced because there is no intermediary.
- IoT devices are directly addressable with blockchain, providing an immutable history of connected devices for trust and transparency.

The correct answer is: It can track sensor data measurements and prevent malicious data.

Question 2

Correct

Mark 2.00 out of 2.00

⚑ Flag question

What is used as the mathematical scheme for authenticating digital information in a blockchain?

Select one:

○ symmetric key

◉ digital signature   ✔

○ proof of work

○ block

Refer to curriculum topic: 6.3.2
Blockchain technology uses a digital signature as the mathematical scheme for authenticating digital information.

Question 3

Correct

Mark 2.00 out of 2.00

⚑ Flag question

Which statement describes the purpose of a data flow diagram (DFD) of an IoT system?

Select one:

- ⦿ A DFD depicts the pathways that data will take between different functional components of the system. ✔
- ○ A DFD uses regular flowchart symbols to depict data flow pathways.
- ○ A DFD uses zones to limit the exposure of different parts of the system to vulnerabilities associated with each zone.
- ○ A DFD includes entry points into an IoT system, but not the people using those entry points.

Refer to curriculum topic: 6.2.2

Data flow diagrams (DFDs) are useful for visualizing an IoT system. DFDs depict the pathways that data will take between different functional components of the system, including entry points into the system and the devices and people using those entry points. DFDs also label the kind of data flows and the protocols in use.

The correct answer is: A DFD depicts the pathways that data will take between different functional components of the system.

Question 4

Correct

Mark 2.00 out of 2.00

⚑ Flag question

Which type of password attack is inefficient because it attempts to use every possible combination of letters, numbers, and symbols to access a system?

Select one:

- ○ dictionary attack
- ⦿ brute force ✔
- ○ password sniffing and cracking
- ○ rainbow tables

Refer to curriculum topic: 6.1.2

A brute force attack is inefficient because it is very time consuming and attempts every possible combination of letters, numbers, and symbols to challenge logins.

Question 5

Correct

Mark 2.00 out of 2.00

⚐ Flag question

What describes proof of work as it is used in a blockchain technology?

Select one:

- ⦿ a process to validate transactions between blocks ✔
- ◯ an algorithm calculated by computers that is used to create the link between blocks
- ◯ a key used to authenticate the individual who created a message
- ◯ a mathematical scheme for authenticating digital information

Refer to curriculum topic: 6.3.2
Proof of work is a process to validate transactions between blocks.

The correct answer is: a process to validate transactions between blocks

Question 6

Correct

Mark 2.00 out of 2.00

⚐ Flag question

Which problem associated with transactions is solved by blockchain technology?

Select one:

- ◯ encryption
- ⦿ trust ✔
- ◯ fee collection
- ◯ key sharing

Refer to curriculum topic: 6.3.1
Blockchain is a technology that solves the problem of trust in transactions. This includes trusting the identity of the person making the transaction, that all transactions are accurate, and that there are no illegal transactions.

The correct answer is: trust

Question 7

Correct

Mark 2.00 out of 2.00

⚑ Flag question

What is a disruptive technology?

Select one:

○ a technology that cannot be used outside of the public sector

○ a technology that negatively affects the global environment

○ a technology that causes negative consequences in the stock market

◉ a technology that can displace competitors because it uses a very different approach ✔

Refer to curriculum topic: 6.3.1

A disruptive technology is a product or service that has a vastly different approach and that can displace competitors or cause new markets. Some consider IoT and blockchain disruptive technologies.

The correct answer is: a technology that can displace competitors because it uses a very different approach

Question 8

Correct

Mark 2.00 out of 2.00

⚑ Flag question

How should trust boundaries be established in an IoT system?

Select one:

○ only between the internal devices and devices located on the internet

○ between the internal devices and internet devices, but not third party application hosts

◉ between two entities where the level of trust at either end of a flow is different ✔

○ always between two neighboring zones

Refer to curriculum topic: 6.2.2

After the system architecture is depicted and zones added, trust boundaries can be added to the DFD. Trust boundaries delimit sections of the network where the level of trust between entities at either end of a flow is different. Trust boundaries should only cross data flows.

The correct answer is: between two entities where the level of trust at either end of a flow is different

Question 9

Correct

Mark 2.00 out of 2.00

⚑ Flag question

Which statement describes the Common Vulnerability Scoring System (CVSS)?

Select one:

○ It is an evaluation system for vulnerability mitigation.

◉ It is a risk assessment system. ✔

○ It is a comprehensive security solution for IoT systems.

○ It is a vulnerability assessment system.

Refer to curriculum topic: 6.2.1
The Common Vulnerability Scoring System (CVSS) is a risk assessment designed to convey the common attributes and severity of vulnerabilities in computer hardware and software systems.

The correct answer is: It is a risk assessment system.

Question 10

Correct

Mark 2.00 out of 2.00

⚑ Flag question

In the video Blockchain: The Next Frontier of IoT, what fundamental question does the Trusted IoT Alliance try to answer?

Select one:

○ How does the world ensure that IoT devices are accepted?

◉ How do you drive the integrity around the data, the management, and the operations of IoT devices and networks? ✔

○ What market forces drive the technology that surrounds IoT devices?

○ How does the world view the development of IoT and what should be changed in that development life cycle?

Refer to curriculum topic: 6.3.1
At the 49 second mark of the video, Anoop Nannra discusses how blockchain technology plays a role in enhancing IoT security and how the Trusted IoT Alliance is trying to answer the question of how do you drive the integrity around the data, the management, and the operations of IoT devices and networks.

The correct answer is: How do you drive the integrity around the data, the management, and the operations of IoT devices and networks?

Question 11

Correct

Mark 2.00 out of 2.00

⚑ Flag question

Which type of security tool is used to discover hosts on the network, locate open ports, and identify the operating system running on a host?

Select one:

- ⚪ risk assessment tools
- ⚪ password vulnerability tools
- 🔵 port mapping tools ✔
- ⚪ web application vulnerability tools

Refer to curriculum topic: 6.1.2

Port mapping tools are invaluable for discovering open ports on end systems and network devices. They are able to discover hosts on the network and report not only on the open ports, but also identify the operating systems that are running on hosts.

The correct answer is: port mapping tools

Question 12

Correct

Mark 2.00 out of 2.00

⚑ Flag question

What is proof of work as it relates to blockchain?

Select one:

- ⚪ It is the security certificate issued.
- ⚪ It is a list of all the devices or people that have touched the transaction.
- ⚪ It is a process that includes a risk factor value that can change as the transaction moves through the process.
- 🔵 It is an algorithm used for transaction validation. ✔

Refer to curriculum topic: 6.3.2

Proof of work (PoW) uses an algorithm (hash) or a block added to the blockchain to validate transactions. Each block is a list of transactions with a hash of the previous block (prior PoW) and a hash of the current block.

The correct answer is: It is an algorithm used for transaction validation.

Question 13

Correct

Mark 2.00 out of 2.00

⚑ Flag question

Which type of global network topology is used by blockchain technology?

Select one:

- ⦿ peer-to-peer ✔
- ◯ hub-and-spoke
- ◯ ring
- ◯ full mesh

Refer to curriculum topic: 6.3.2
Blockchain technology uses a peer-to-peer network of computers running the Blockchain protocol and each computer holds an identical copy of the transaction ledger.

The correct answer is: peer-to-peer

Question 14

Correct

Mark 2.00 out of 2.00

⚑ Flag question

What describes a block as it is used in blockchain technology?

Select one:

- ◯ an algorithm calculated by computers that is used to create the link between blocks
- ⦿ a list of transactions linked together with other lists of transactions ✔
- ◯ a key used to authenticate the individual who created a message
- ◯ a mathematical scheme for authenticating digital information

Refer to curriculum topic: 6.3.2
In blockchain technology, a block is a list of transactions that are linked together with other lists of transactions.

The correct answer is: a list of transactions linked together with other lists of transactions

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Question 15

What is the purpose of performing a vulnerability assessment?

Refer to curriculum topic: 6.3.2

In blockchain technology, a block is a list of transactions that are linked together with other lists of transactions.

The correct answer is: a list of transactions linked together with other lists of transactions

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Question 15

Correct

Mark 2.00 out of 2.00

⚑ Flag question

What is the purpose of performing a vulnerability assessment?

Select one:

○ Analyze risks so that they may be prioritized and addressed accordingly.

○ Examine off-the-shelf tools to discover, investigate, and disseminate threat information.

○ Research recent patches and updates that have become available.

◉ Identify vulnerabilities that are likely to be exploited by threat actors.   ✔

Refer to curriculum topic: 6.1.1

Performing a vulnerability assessment allows a security researcher to identify vulnerabilities that are likely to be exploited by threat actors. These vulnerability assessments may be automated or manually performed.

The correct answer is: Identify vulnerabilities that are likely to be exploited by threat actors.

Finish review