

Chapter 1

What allows digital devices to interconnect and transmit data?

a network

What is a sensor?

a device that detects or measures an event or physical property

What is the core component of Intent-Based Networking?

artificial intelligence

What is comprised of millions of smart devices and sensors connected to the internet?

the Internet of Things

True or False? Once connected to the home gateway, smart devices can be controlled from a smartphone, tablet, or PC.

true

What type of device could allow a refrigerator to place a replacement order for an item contained within it?

sensor

True or False? The Internet of Things can help organizations improve the efficiency and productivity of manufacturing processes and operations.

true

What information is conveyed by the SSID that is configured on an IoT device?

the wireless network

Which type of computing is located at the edge of a business or corporate network and that allows data from sensors to be preprocessed?

fog

Which tool allows a user to simulate real networks?

Packet Tracer

Which type of network is used to connect a company located in one area of a city to another location in a city far away?

WAN

Which command is used to test network connectivity and provide a response to each packet received by the remote host?

ping

True or False? The Internet of Things will connect inanimate objects to the network with intelligent sensors.

true

What is needed in a smart home to connect sensors and smart devices to a network?

home gateway

Which type of wireless network is used to connect devices within a city to create a metropolitan-area network (MAN)?

WiMAX

Chapter 2

What output is expected when the function that is shown below is entered in a Python program interpreter? >>>print Cisco 1

"SyntaxError: Missing parentheses in call to 'print'"

A student has a digitized version of an idea for a product. What machine can the student use to turn the idea into a solid object?

3D printer

Refer to the exhibit. What does the exhibited flow chart symbol represent?

process

Refer to the exhibit. What does the exhibited flow chart symbol commonly represent?

decision

What are two resources that could help someone learn to program? (Choose two.)

Code Academy

Khan Academy

What is displayed after the following code is entered into a Python interpreter? addition = 22 +10
print(addition)

32

Refer to the exhibit. A specific Blockly block has a slot on the top. What is the purpose of this slot?

The slot allows a block with a bevel tab on the bottom to be connected above the block shown.

What is one way to pay for prototyping?

crowd funding

Which Python programming function is used to display output?

print

What is Blockly?

a programming tool for beginners

How is a new variable created in Blockly?

Drag the variable block onto the work space area.

What is used to illustrate how a given process will run?

flow chart

Which output would be displayed if the code that is shown below is entered in a Python interpreter?

It shows "SyntaxError"

Which platform is a low cost, credit-card-sized computer?

Raspberry Pi

What is the output when the following code is entered into a Python program interpreter?

```
[1,2,4,5] + [3,6]
```

[1,2,4,5,3,6]

Chapter 3

Which attribute of big data involves an exponential data growth rate?

velocity

True or False? Structured data is easier to analyze and store than unstructured data.

true

What characterizes data management problems associated with big data storage?

generating and collecting data from multiple sources

What are three features of Hadoop? (Choose three.)

automatic replication of data across clusters

uses HDFS as a fault tolerant file system

easily scalable cluster sizes

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Chapter 4

What are two examples of automation? (Choose two.)

A building automatically adjusts the heating and lights based the routine of the occupants.

A robot cleans up an industrial chemical spill.

Which two applications commonly use ML technology? (Choose two.)

credit card fraud detection

speech recognition

Which action takes place in the assurance element of the IBN model?

verification and corrective action

Which technology uses AI and other technologies to reconfigure a network to comply with service levels? Correct Answer

IBN

Which element of the IBN model orchestrates policies and configures systems?

activation

True or False? An appliance that lowers power consumption during peak demand is considered a smart device.

true

Which field has traditionally been tied to automation?

robotics

What is artificial intelligence?

the ability of a device to "learn" based on code and provided data

Which technology enables features such as speech recognition, product recommendations, and credit card fraud detection?

machine learning

What are two characteristics of artificial intelligence? (Choose two.)

It uses systems that mimic human cognitive functions such as learning and problem solving.

It uses intelligent agents that interact with the environment and make decisions to reach a specific goal.

What term is used to describe the intelligence demonstrated by machines?

artificial intelligence

What is a key feature of the translation element of the intent-based networking model?

application of business intent to network configuration

What three technologies control network functions to accomplish a desired intent in an intent based network? (Choose three.)

automation

artificial intelligence

machine learning

What is a requirement for a device to be referred to as a smart device?

The device can make a decision or take a course of action based on outside information.

Which ML technology can be used to identify and track individual persons?

facial recognition

CHAPTER 5

What are two recommended steps to protect and secure a wireless network? (Choose two.)

Update firmware.

Use WPA2-AES encryption.

Which three passwords are the least secure? (Choose three.)

135792468

randolph

asdfghjkl

Match the security best practice to the description.

implementing human resource security measures : **research and perform background checks on employees**

employing access controls: **assign user roles and privilege levels**

educating users: **train users on security**

regularly testing incident responses: **perform and test emergency response scenarios**

What is a wireless router security best practice that limits access to only specific internal hosts?

MAC address filtering

What are three examples of personally identifiable information? (Choose three.)

bank account number

birth date

vehicle identification number

How can a virtual assistant be a security risk?

Personal information could be leaked.

Which two online activities pose high security risks? (Choose two.)

following email links that have already been scanned by the email server

sharing information on social media

Which three elements should be combined when creating a strong password? (Choose three.)

special characters

combinations of letters and numbers

phrases

What is the goal of a white hat hacker?

protecting data

What is a goal of performing a risk assessment?

valuing assets to justify security expenditures

Which action can help reduce online risk?

only conduct transactions on websites after verifying the URL is correct

How are USB flash drives a security risk?

They have a controller that can be infected.

Why would an IT person use Zabasearch?

to research a person

What is used to identify a wireless network?

SSID

An employee is using a coffee shop Wi-Fi hotspot to access corporate email. What action can the employee take to reduce the security risk of using a hotspot?

Encrypt traffic through a VPN.

Chapter 6

What is the primary focus of the CCNA Routing and Switching curriculum that is available through the Cisco Networking Academy?

It provides learners to have a comprehensive overview of networking concepts and skills.

What is the primary focus of the IoT fundamentals courses available through Cisco Networking Academy curriculum?

The courses teach learners how to connect sensors to the cloud, analyze big data, and securely collect data.

True or False? Even though IoT is considered an enabling technology, not all jobs created are IT-related.

true

How many students have been trained through Cisco Networking academies to date?

5 million

What is the primary focus of the IT Essentials course available through the Cisco Academy curriculum?

It teaches learners the fundamentals of computer hardware and software.

How many countries have Cisco Networking Academies helping individuals prepare for industry-recognized certifications and mastering IT skills?

180

Which IoT-related job would deal with the development and implementation of the underlying technologies within the digital world?

enablers

What is a Cisco developer program community that allows the user to learn, connect, inspire, and code and consists of coordinated developer tools, and sandboxes?

Cisco Learning Network

Which series of Cisco Networking Academy courses is designed to develop skills for securely collecting data, connecting sensors to the cloud, and analyzing big data?

IoT Fundamentals

Which IT community is a collection of resources designed for people who wish to develop skills and pursue a Cisco certification?

Cisco Learning Network

Final Exam

Which character is used within a search engine to gather data efficiently by placing the character before and after the name of a particular person?

quotation mark (")

Which two types of institutions do malicious web pages often look like? (Choose two.)

bank

financial

True or False? Comma-separated values (CSV), JSON, and XML are all tools that can be used to manipulate structured data.

true

What is an open-source physical computing platform that can take input from a variety of switches or sensors to control physical objects?

Arduino

Which type of network consists of wired computers in a college classroom?

LAN

What is the largest network in existence?

the internet

What are three benefits of cloud computing? (Choose three.)

It eliminates or reduces the need for onsite IT equipment, maintenance, and management.

It enables access to organizational data anywhere and at any time.

It streamlines the IT operations of an organization by subscribing only to needed services.

What are the two areas of physical security within a data center?

outside

inside

What is the core component of Intent-Based Networking?

artificial intelligence

Match the logic structure to the function.

allow the code to make decisions - if-then

execute a block of code while a condition is true - while

repeat the execution of a specific block of code for a specific number of times - for

What are two characteristics of the Python programming language? (Choose two.)

It runs without conversion to machine-language.

The code is easy to read.

Which two data types would be classified as personally identifiable information (PII)? (Choose two.)

Facebook photographs

vehicle identification number

Which two skills help with IoT prototyping? (Choose two.)

programming

design

What are two requirements to connect a smart device to a home wireless network? (Choose two.)

IP addressing

SSID

What is a key feature of the assurance element of the intent-based networking model?

end-to-end verification of network-wide behavior

A company requires using a secure encrypted internet connection when connecting to the corporate network from outside the company. Which technology should be used when employees travel and use a laptop?

VPN

Which security best practice involves defining company rules, job duties, and expectations?

developing a security policy

What are three attributes of data that would indicate that it may be big data? (Choose three.)

variety

volume

velocity

Which technology has the intelligence that is demonstrated by machines in a way that mimics human cognitive functions?

AI

What is the purpose of data analytics?

to gain new insights from data

Mined data can be visualized through the use of charts. Select two criteria that can be used to determine the best chart selection. (Choose two.)

number of variables to be shown

items requiring comparison

What device provides auto discovery services for smart devices that are connected to the network?

home gateway

Which type of network is the connection between a Bluetooth headset and a vehicle?

PAN

Change will have to occur in the corporate network in order to prepare for the Internet of Things.

Which type of testing would a company do to demonstrate the benefits of networking a new "thing" that was not on the network before?

prototyping

What are two features of automation? (Choose two.)

a process that eventually eliminates the need for human intervention

a process that is self-driven

What are two things that all digital devices need in order to work? (Choose two.)

computer program

data

What is used to provide IoT sensors with access to the network?

a microcontroller

What is the purpose of Packet Tracer?

to simulate and visualize one or more networks

Which statement describes global variables in programming languages?

They can be used within any function of a program.

How is data that has been collected through sources such as web pages, audio, or tweets categorized?

unstructured data

Match the term with the definition. (Not all options are used)

Hadoop - a comprehensive ecosystem

distributed processing - breaks large volumes of data

fog computing - an architecture that utilize

cloud services - a collection of data centers

What limits the types of different objects that can become intelligent sensors on the Internet of Things?

our imagination

Which technology is a subset of AI that uses statistical techniques to enable computers to "learn" from collected data?

ML

True or False? With artificial intelligence, smart devices can modify processes and settings on the fly in response to changes on the network.

true

Which technology is used as a visual programming tool to create a program by connecting colored blocks?

Blockly