

Chapter 1

Mobile Devices

THE COMPTIA A+ 220-1101 TOPICS COVERED IN THIS CHAPTER INCLUDE THE FOLLOWING:

- ✓ 1.1 Given a scenario, install and configure laptop hardware and components.
 - Hardware/device replacement
 - Battery
 - Keyboard/keys
 - Random-access memory (RAM)
 - Hard disk drive (HDD)/solid-state drive (SSD) migration
 - HDD/SSD replacement
 - Wireless cards
 - Physical privacy and security components
 - Biometrics
 - Near-field scanner features
- ✓ 1.2 Compare and contrast the display components of mobile devices.
 - Types
 - Liquid crystal display (LCD)
 - In-plane switching (IPS)
 - Twisted nematic (TN)
 - Vertical alignment (VA)
 - Organic light-emitting diode (OLED)
 - Mobile display components
 - Wi-Fi antenna connector/placement
 - Camera/webcam
 - Microphone



- Touch screen/digitizer
- Inverter

✓ **1.3 Given a scenario, set up and configure accessories and ports of mobile devices.**

- Connection methods
 - Universal Serial Bus (USB)/USB-C/microUSB/miniUSB
 - Lightning
 - Serial interfaces
 - Near-field communication (NFC)
 - Bluetooth
 - Hotspot
- Accessories
 - Touch pens
 - Headsets
 - Speakers
 - Webcam
- Docking station
- Port replicator
- Trackpad/drawing pad

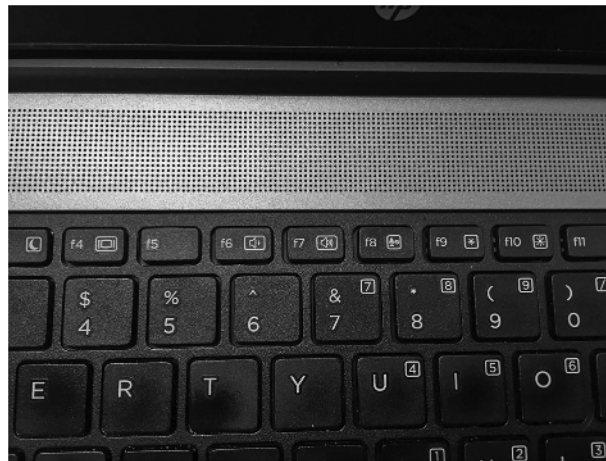
✓ **1.4 Given a scenario, configure basic mobile-device network connectivity and application support.**

- Wireless/cellular data network (enable/disable)
 - 2G/3G/4G/5G
 - Hotspot
 - Global System for Mobile Communications (GSM) vs. code-division multiple access (CDMA)
 - Preferred Roaming List (PRL) updates
- Bluetooth
 - Enable Bluetooth
 - Enable pairing



- Find a device for pairing
- Enter the appropriate PIN code
- Test connectivity
- Location services
 - Global Positioning System (GPS) services
 - Cellular location services
- Mobile device management (MDM)/mobile application management (MAM)
 - Corporate email configuration
 - Two-factor authentication
 - Corporate applications
- Mobile device synchronization
 - Account setup
 - Microsoft 365
 - Google Workspace
 - iCloud
 - Data to synchronize
 - Mail
 - Photos
 - Calendar
 - Contacts
 - Recognizing data caps

1. You are configuring the mail app on an iPhone to use an Outlook.com email address. What configuration information do you need to enter to establish connectivity?
 - A. Email address and password
 - B. Email address, password, and server name
 - C. Email address, password, server name, and mail protocol
 - D. Email address, password, server name or IP address, and mail protocol
2. Which type of smartphone display has fewer layers, providing more flexibility, a better viewing angle, and excellent color as compared to other technologies?
 - A. IPS
 - B. OLED
 - C. LED
 - D. TN
3. In which scenario would you use the Fn key and the F10 key?



- A. To turn the screen brightness down
 - B. To turn the screen brightness up
 - C. To turn the speaker volume down
 - D. To turn the speaker volume up
4. You are purchasing a mobile device that allows you to use multi-finger gestures to interact with the device. What type of touchscreen technology does this device most likely use?
 - A. Capacitive
 - B. Infrared
 - C. SAW
 - D. Resistive

5. You are using a public Wi-Fi hotspot and believe that someone is trying to hack into your laptop. Which laptop feature should you use to immediately turn off all wireless connections?
 - A. Silent mode
 - B. Quiet mode
 - C. Airplane mode
 - D. Connectionless mode
6. You have been asked to purchase a new camera for the company photographer. Some of the cameras are marketed as “smart” cameras. What key feature does this likely mean the camera includes?
 - A. Wi-Fi
 - B. RJ-45
 - C. Separate video processor
 - D. Internal hard drive
7. Your friend’s iPhone 13 will no longer charge. They have tried replacing the charging block and cable with compatible ones and tested the wall outlet. What should be done next?
 - A. Purchase a new phone.
 - B. Purchase a new battery.
 - C. Take the phone to a repair shop.
 - D. Use a wireless charging pad.
8. Your customer brought you a laptop with an internal battery that will no longer charge. You have told them that replacing the battery will be no problem at all. Which of the following will you need to do first?
 - A. Remove the back cover.
 - B. Remove the keyboard.
 - C. Disconnect the external power.
 - D. Disconnect the LCD panel.
9. A coworker is having a problem with their laptop and has asked you to fix it. When an external keyboard is plugged in, the laptop works just fine, but without it strange characters appear on the screen when typing. Which of the following are likely causes? (Choose two.)
 - A. The driver is corrupted and needs to be updated/replaced.
 - B. The ribbon cable is partially disconnected and needs to be reseated.
 - C. The laptop needs to be replaced.
 - D. There is debris under the keys.

10. You're working as the IT support person at an accounting firm. One of the accountants dropped their keyboard, and the number 5 key is no longer there. This is a critical problem for an accountant. What is the most cost-effective way to get them up and running again?
 - A. Replace the laptop with a new one.
 - B. Replace the entire keyboard.
 - C. Replace the missing key.
 - D. Give them a desktop computer to use.
11. Your boss has asked you to maximize the RAM in their laptop computer. You check the specifications and discover that the maximum system RAM is 32 GB of DDR4 RAM. The laptop currently has 16 GB onboard RAM and one empty slot. Which of the following RAM modules will you purchase?
 - A. One 16 GB SODIMM
 - B. One 32 GB SODIMM
 - C. One 16 GB DIMM
 - D. One 32 GB DIMM
12. A friend is trying to install an update on their iPod, but they're receiving a message about insufficient space. They want to know if you can upgrade their storage. What will you tell them?
 - A. Sure, bring it over later today.
 - B. Storage can't be upgraded. You'll need to buy a new iPod.
 - C. Storage can't be upgraded, but you may be able to offload some apps you no longer use.
 - D. Just purchase more space on iCloud; it's the same thing.
13. You need to replace a failed SATA hard drive on a 10-year-old laptop. The user has asked that the new drive be as fast as possible, regardless of disk space or cost. What type of drive should you install?
 - A. SSD
 - B. Magnetic
 - C. Hybrid
 - D. NVMe
14. You need to replace a failed hard drive in a user's laptop, and it's a model you are unfamiliar with. You look at the bottom of the laptop and see no obvious entrance points. Which component will you most likely need to remove to access the hard drive bay?
 - A. Plastics/frames
 - B. Battery
 - C. System board
 - D. Keyboard

15. You are on the phone talking to a technician who is trying to upgrade a laptop. The technician is having trouble identifying the Mini PCIe card. How wide should you tell the technician that the card is?
 - A. 27 mm
 - B. 30 mm
 - C. 51 mm
 - D. 60 mm
16. Which mobile connection type allows you to share your cellular Internet connection with a Wi-Fi enabled device?
 - A. Hotspot
 - B. NFC
 - C. Bluetooth
 - D. IrDA
17. Your friend wants to be able to use their phone to pay for purchases at a popular coffee shop. They noticed that the phone needs to be about 4" from the coffee shop's reader. What radio wave communication type do you need to configure for your friend?
 - A. NFC
 - B. Wi-Fi
 - C. IrDA
 - D. Bluetooth
18. You're working from a home office and need to be able to type on your keyboard while talking with clients, so you purchase a wireless headset. What wireless technology will you need to enable on your laptop to ensure that the headset and laptop can communicate?
 - A. Wi-Fi
 - B. IR
 - C. Bluetooth
 - D. NFC
19. You are wearing your smart watch, which allows you to make payments like a credit card. What type of connection technology does this service use?
 - A. Bluetooth
 - B. NFC
 - C. Wi-Fi
 - D. IR

- 20.** You're upgrading the Wi-Fi card in a manager's laptop and notice that the antenna cable is frayed, so you need to replace that too. What will you likely need to do to replace the antenna?
- A.** Wrap the antenna with electrical tape.
 - B.** Open the display to replace the cable.
 - C.** Attach a dongle for the new cable.
 - D.** Just install the new card because the antenna is part of the card.
- 21.** Your boss has asked you to make sure that each of the company's laptops has a biometric scanner as an extra measure of security. Which of the following are biometric devices that are commonly found and can be configured on laptops? (Choose two.)
- A.** ID card scanner
 - B.** Face ID
 - C.** Fingerprint reader
 - D.** Retina scanner
- 22.** Your company is producing posters for an upcoming public relations campaign. The project leader wants to embed information into an NFC Type 4 tag in the poster. How much information can this tag hold?
- A.** 16 KB
 - B.** 32 KB
 - C.** 1.4 MB
 - D.** 2.4 MB
- 23.** Your customer has an iPhone 8 and wants to read and write NFC tags with it. What advice will you give them? (Choose two.)
- A.** Their iPhone will only work with Apple Pay.
 - B.** They need to upgrade to iPhone X to write NFC tags.
 - C.** With iOS 13 or better on their device, they'll be able to read and write NFC tags using a third-party app.
 - D.** iPhone 12 and iPhone 13 can read NFC tags simply by holding the phone over the tag.
- 24.** You've been asked by the company president what can be done with NFC in addition to paying for coffee. What will you tell them? (Choose three.)
- A.** Securely share data with someone you're having lunch with.
 - B.** Beam data to someone 10 feet away.
 - C.** Transfer files, photos, and videos.
 - D.** Add information or URLs to business cards, making it easier for customers to learn about your products or services.

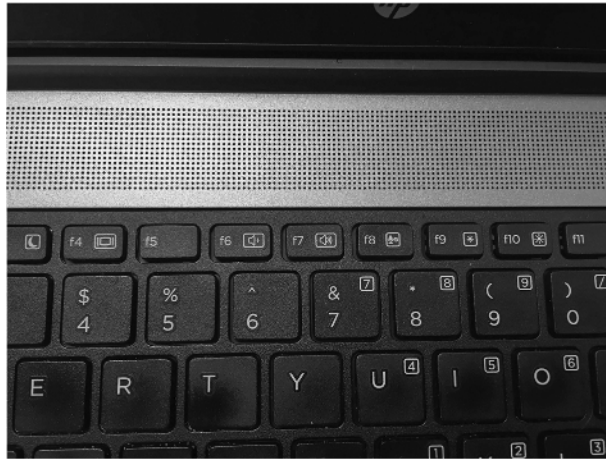
25. You are investigating new laptops for your company. You want the laptop displays to have a wide viewing angle. Which technology standard is best suited for your needs?
- A. LED
 - B. SVA
 - C. IPS
 - D. TN
26. Which type of LCD has the best contrast, meaning the darkest black and lightest white?
- A. TN
 - B. IPS
 - C. VA
 - D. OLED
27. Of the laptop LCD technologies, which consumes the least amount of power?
- A. LED
 - B. IPS
 - C. TN
 - D. VA
28. What type of display uses organic materials that themselves light up so that no backlight is needed, meaning true black and greater contrasts can be achieved?
- A. QLED
 - B. Mini-LED
 - C. LED
 - D. OLED
29. You have recently purchased a laptop computer with a touchscreen. It allows you to draw images on the screen and save them on the computer. Which device is responsible for converting the input into the image that you see and save?
- A. Inverter
 - B. Touchpad
 - C. Digitizer
 - D. Touchscreen
30. Which two components of a laptop or other mobile device are the most useful when making a videoconference call? (Choose two.)
- A. Digitizer
 - B. Webcam
 - C. Microphone/speaker
 - D. Inverter

31. Of the laptop components listed, which one is least likely to be built into the display?
- A. Wi-Fi antenna
 - B. Speakers
 - C. Webcam
 - D. Digitizer
32. Which mobile device component can take input from a stylus or your finger, depending on the sensor type, and convert it into an image on the laptop or other mobile device?
- A. Digitizer
 - B. Touchpad
 - C. Point stick
 - D. Inverter
33. What is this device, which can be found inside an iPhone 10 along the bottom, connected with a small ribbon cable?



- A. Wi-Fi antenna
- B. Digitizer
- C. Haptics connector
- D. Stylus sensor

34. In which scenario would you use the Fn key and the F4 key shown here?



- A. To turn the touchpad on or off
 - B. To change the video output to an external display
 - C. To change the screen orientation from landscape to portrait
 - D. To turn the keyboard backlight on or off
35. Which type of mobile device is known for using electrophoretic ink?
- A. E-reader
 - B. Smart watch
 - C. Smart glasses
 - D. Tablet
36. Which display component is capable of discharging energy and causing severe injuries to technicians?
- A. Screen
 - B. Backlight
 - C. Inverter
 - D. LCD
37. Which of the following is not a type of LCD?
- A. OLED
 - B. IPS

- C. TN
 - D. VA
38. What types of networking will smart cameras often have built into them? (Choose two.)
- A. Bluetooth
 - B. IrDA
 - C. RJ-45
 - D. Wi-Fi
39. What component or characteristic on most mobile phones has its ability measured in megapixels?
- A. Brightness
 - B. Contrast
 - C. Camera
 - D. Digitizer
40. What three components of a mobile display are often connected in such a way that if one fails, you must replace the other two with it? (Choose three.)
- A. Glass cover
 - B. LCD
 - C. Wi-Fi antenna
 - D. Digitizer
41. An artist in your company's marketing department just received the new drawing pad that they ordered. What might you need to do to configure it? (Choose three.)
- A. Install an alternate operating system.
 - B. Plug the device into an appropriate port, likely USB.
 - C. Enable Windows Ink or other software settings.
 - D. Calibrate the device.
42. A coworker just started working with their new laptop yesterday, and today they're complaining that the trackpad won't work. You suspect that they accidentally turned it off. What key or key combination based on the graphic will remedy the problem?



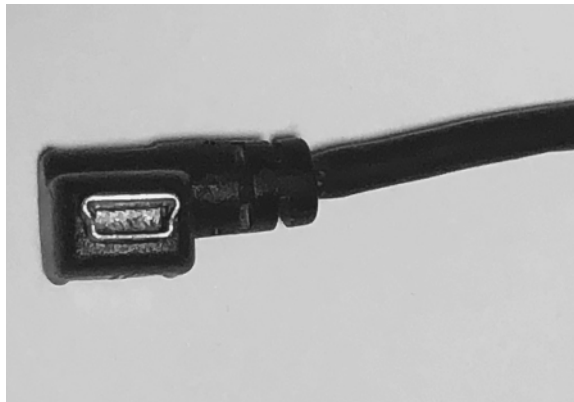
- A. Fn and F8
 - B. Fn and F9
 - C. F7
 - D. F9
43. One of your coworkers has purchased an external Bluetooth trackpad to use with their tablet. They've turned to you, the company IT person, to install and configure it for them. What actions will you need to take? (Choose two.)
- A. Plug the device into a USB port.
 - B. Install drivers.
 - C. Put the device in pairing mode and open Bluetooth settings on the tablet, then tap the trackpad.
 - D. Go to Settings to configure speed and scrolling features.
44. What type of connection are you using if you use a USB cable to connect your laptop to your cell phone in order to use the cellular wireless connection from the laptop?
- A. Hotspot
 - B. Tethering
 - C. USB networking
 - D. Phoning
45. You often work remotely, in your favorite coffee shop. What device can you use to physically protect your laptop from theft if you step away from the table for a minute?
- A. Docking station
 - B. Protective cover
 - C. Cable lock
 - D. LoJack
46. The company president misplaced their charging cable for their iPhone 13. You tell them it's no problem, and hand them a new one. What type of connector does this iPhone use for charging?
- A. Thunderbolt
 - B. Lightning
 - C. ApplePower
 - D. USB-C

47. What type of mobile device connector is shown here?



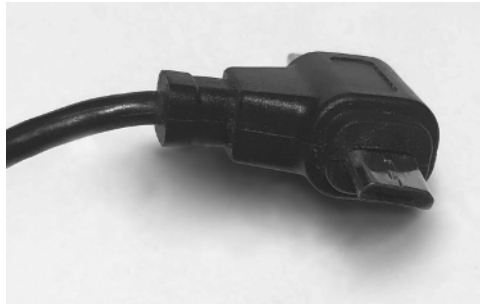
- A. USB-C
 - B. Lightning
 - C. Micro-USB
 - D. Thunderbolt
48. Your significant other just purchased a new car and wants you to configure their cell phone to work through the car using voice commands. You must initiate pairing on the phone and choose to search for pairing devices on the car. What protocol is being used by the car and the device?
- A. 802.11a
 - B. Lightning
 - C. Bluetooth
 - D. Wi-Fi Enabled
49. A laptop user wants to have a full-sized display and keyboard, as well as an external hard drive, and speakers available to them at their desk. Which accessory can they purchase to avoid plugging each of these devices separately into their laptop every time they return to the desk? (Choose two.)
- A. KVM switch
 - B. Port replicator
 - C. Desktop station
 - D. Docking station
50. A user needs ports for external devices in addition to what their laptop is capable of connecting. The user would like these devices to have connectivity with each other whether or not the laptop is there. Which of the following will provide that option?
- A. Docking station
 - B. Port replicator
 - C. KVM switch
 - D. Docking port

51. Which laptop expansion port technology was developed by Apple and Intel and supports a wide variety of peripheral devices?
- A. USB
 - B. DisplayPort
 - C. eSATA
 - D. Thunderbolt
52. You're upgrading a user's laptop from 802.11n to 802.11ac. What port will you most likely use inside the laptop?
- A. PCI
 - B. PCIe
 - C. Mini PCIe
 - D. Mini PCIe x16
53. You've been handed a device to install. The cable looks like the one here. What type of connector does this device use?



- A. USB-C
 - B. miniUSB
 - C. microUSB
 - D. Thunderbolt 3
54. What port looks identical to a Thunderbolt 3 connector but will not charge a connected device as quickly?
- A. USB-C
 - B. miniUSB
 - C. USB A
 - D. microUSB

55. You've been handed a device to install. The cable looks like the one here. What type of connector does this device use?



- A. USB-C
 - B. miniUSB
 - C. microUSB
 - D. Thunderbolt 3
56. You're the IT manager for a manufacturing company. One of the corporate executives is questioning why you're buying serial instead of parallel devices. You explain that serial transmits only one bit of information at a time, but it does so very fast compared to parallel. Which of the following will you tell them is not a serial connection?
- A. Centronics
 - B. Thunderbolt
 - C. Lightning
 - D. USB-C
57. You're configuring a new laptop for a user. What devices can you plug into the port shown here? (Choose two.)



- A. Speaker
- B. Headphones
- C. Webcam
- D. Touch pen

- 58.** A technician has a failed Lenovo laptop and suspects the motherboard is bad. They have several other laptops available from which they can harvest parts. Which of the following statements is most likely true regarding the replacement motherboard that is selected?
- A.** The motherboard is not replaceable.
 - B.** Any laptop motherboard will work.
 - C.** A motherboard from any other Lenovo laptop will work.
 - D.** Only a motherboard from that same model of Lenovo laptop will work.
- 59.** What type of connector is used on Android smartphones? (Choose two.)
- A.** Lightning
 - B.** Thunderbolt
 - C.** USB-C
 - D.** USB Micro-B
- 60.** You will be traveling to another country for work and will have a 10-hour airplane flight. You need to work on your laptop while on the flight, but your battery won't last that long. What should you buy to allow you to use the auxiliary power outlets on the airplane?
- A.** AC adapter
 - B.** DC adapter
 - C.** Power inverter
 - D.** Docking station
- 61.** The AC adapter for your laptop is not working properly, and you are searching for a replacement. Which two factors should be most important when selecting a new AC adapter? (Choose two.)
- A.** Polarity
 - B.** Same wattage as the original
 - C.** Brand of the adapter
 - D.** Size of the adapter
- 62.** How do modern docking stations connect to laptops? (Choose two.)
- A.** USB 2
 - B.** USB-C
 - C.** Thunderbolt 3 or 4
 - D.** HDMI
- 63.** You have enabled the GPS service in your tablet. What is the minimum number of GPS satellites your tablet needs to be in contact with to determine its location?
- A.** One
 - B.** Two
 - C.** Three
 - D.** Four

- 64.** What is the name of the OS used by the Apple Watch, which was designed specifically for the watch?
- A.** iOS
 - B.** OS X mobile
 - C.** watchOS
 - D.** Tizen
- 65.** A technician needs to replace a failed laptop hard drive. Which of the following form factors could it use?
- A.** 1.3"
 - B.** 2.0"
 - C.** 2.5"
 - D.** 3.5"
- 66.** What type of wearable technology device is specifically designed to track a user's movements and heart rate and may include features such as GPS?
- A.** Smart watch
 - B.** Fitness monitor
 - C.** Smart glasses
 - D.** Smart headset
- 67.** You want to play video games on your tablet computer. Which accessory would you purchase if you wanted to play the game much like you would on a gaming console?
- A.** Docking station
 - B.** Touch pad
 - C.** Point stick
 - D.** Game pad
- 68.** Your new laptop has 4 GB system RAM and an integrated video card. The default setting specifies 512 MB of video memory. How much RAM is available for the processor to use?
- A.** 4 GB.
 - B.** 3.5 GB.
 - C.** 3 GB.
 - D.** It's variable.
- 69.** Oculus, Samsung, and HTC are manufacturers of what specific type of wearable technology devices?
- A.** Smart glasses
 - B.** Smart headsets
 - C.** Smart watches
 - D.** VR/AR headsets

70. Tablet computers feature touchscreens that are approximately what size?

- A.** Between 5" and 7"
- B.** Between 3" and 5"
- C.** Between 7" and 12"
- D.** Between 12" and 24"

71. What type of connectors are the two shown in the center here?



- A.** Lightning
- B.** Thunderbolt
- C.** DisplayPort
- D.** PCIe x 1

72. Which type of network connection is least likely to be found on a tablet computer?

- A.** Wi-Fi
- B.** Bluetooth
- C.** RJ-45
- D.** Cellular

73. What type of device would use a Lightning connector to charge and transfer data?

- A.** Samsung smartphone
- B.** Fitbit watch
- C.** Intel based laptop
- D.** Apple iPhone

74. You are upgrading a laptop with a Mini PCIe card. What type of connector does Mini PCIe use?

- A.** 52-pin
- B.** 68-pin
- C.** 144-pin
- D.** 200-pin

75. What is the likely type of Wi-Fi antenna connector you will find as an external connector on a laptop?

- A.** SMA-female-RP
- B.** N-male
- C.** SMA-male-RP
- D.** N-female

- 76.** A warehouse manager at a factory is required to supervise productivity while walking around and taking notes. They find their laptop awkward to type on while walking but do not want to use two devices. What would you recommend they do?
- A.** Get a small tablet to synchronize with the laptop.
 - B.** Place accessible workstations throughout the factory.
 - C.** Get a laptop with a rotating or removable screen.
 - D.** Get a smaller laptop.
- 77.** After enabling your device for communication using the IEEE 802.15.1 standard, what is the next step?
- A.** Enter the PIN code.
 - B.** Find a device for pairing.
 - C.** Enable pairing.
 - D.** Open port 802.15.1.
- 78.** You've enabled Bluetooth on your new headset and your laptop and enabled pairing on both. They have discovered each other, so what is the typical next step?
- A.** Pressing and holding a Bluetooth button
 - B.** Entering the Bluetooth password
 - C.** Entering the Bluetooth PIN code
 - D.** Exiting out of any running Bluetooth applications
- 79.** You're configuring private email on a coworker's cell phone. They want to make sure all of their mail will be only on their phone. Which mail protocol keeps all emails stored on a single device and can only be accessed from one device?
- A.** IMAP
 - B.** SMTP
 - C.** POP3
 - D.** S/MIME
- 80.** You're configuring company email on a coworker's phone. The company needs to keep a copy of every email on their server, even after it's accessed by the user. Which mail protocol keeps all emails stored on the server, allowing messages to be synchronized between multiple devices?
- A.** IMAP
 - B.** SMTP
 - C.** POP3
 - D.** S/MIME

- 81.** What service is built into Apple-developed devices and permits users and subscribers to store documents, media, and contact information off their devices?
- A.** iStore
 - B.** OneDrive
 - C.** iCloud
 - D.** CloudOnline
- 82.** What is the hosted messaging version of Microsoft's Exchange mail server that saves customers email off-site?
- A.** Google Inbox
 - B.** Exchange Online
 - C.** iExchange
 - D.** On-Prem Exchange
- 83.** What configuration settings are commonly used when setting up email from an online provider on a device?
- A.** Active Directory domain name
 - B.** Port and TLS settings
 - C.** Email server name
 - D.** Username and password
- 84.** What type of update is done to mobile devices over the air?
- A.** PRI and PRL
 - B.** IMEI
 - C.** Screen resolution
 - D.** IMSI
- 85.** Which number that is a part of the GSM system is hard-coded into the phone and identifies your physical phone hardware to the cellular tower?
- A.** PRI
 - B.** IMSI
 - C.** IMEI
 - D.** MAC
- 86.** Which unique mobile number identifies you as a user and is coded into the SIM card if you're on a GSM network, or otherwise linked to your account, allowing you to transition from one phone to another?
- A.** PRI
 - B.** IMSI
 - C.** IMEI
 - D.** MAC

- 87.** A user is traveling to a country that employs content blocking technology on the cellular network. What would you suggest setting up to bypass the content blocking as well as keep the user's mobile browsing more private?
- A.** S/MIME
 - B.** PRL
 - C.** Baseband
 - D.** VPN
- 88.** What best practice can save someone from losing the data such as calendar entries and contacts on their mobile device if the device is lost?
- A.** Synchronization
 - B.** VPN
 - C.** Encryption
 - D.** Updating
- 89.** A user wants a list of favorite websites to be readily available between multiple devices, including their mobile device. What is the best option?
- A.** Email weblinks to self.
 - B.** Send links to a URL shortening service.
 - C.** Synchronize bookmarks.
 - D.** Print web URLs to carry.
- 90.** When two parents wish to share appointment dates and times between devices, what is their best option?
- A.** Synchronizing calendars
 - B.** Sharing calendar passwords
 - C.** Texting calendar data to each other
 - D.** Emailing calendar invites to each other
- 91.** What Windows app is used to synchronize data between a user's mobile devices like smartphones and their desktop computers?
- A.** MSync
 - B.** ActiveSync
 - C.** SyncTime
 - D.** Timewarp
- 92.** What technology lets you minimize how often a user must log in for multiple services?
- A.** SSO
 - B.** SMTP
 - C.** Synchronization
 - D.** Nonrepudiation

- 93.** You're installing Bluetooth speakers in a conference room and just entered the pin to connect the two devices. What is your next step?
- A.** Enable pairing.
 - B.** Search for the Bluetooth device.
 - C.** Enable Bluetooth.
 - D.** Test connectivity.
- 94.** The owner of a company that solely provides transportation from the airport to various hotels wants to employ a software that will tell them where every vehicle is at all times. All of the vehicles use satellite-based navigation systems. What technology is most likely being used to track where they are?
- A.** Global Positioning System (GPS)
 - B.** Mobile Device Management (MDM)
 - C.** Cellular location services
 - D.** Mobile Application Management (MAM)
- 95.** You're going hiking this weekend in unfamiliar territory and have installed an application on your phone that shows you where you are on the map in relation to the trails and surrounding areas. What two types of location technology might this app use? (Choose two.)
- A.** GPS
 - B.** MDM
 - C.** Cellular location services
 - D.** RFID
- 96.** Your coworker wants to be able to use maps with their phone but is unhappy that other applications are also tracking their physical location. They ask for your help. Which of the following is not true?
- A.** If location services are turned off for one purpose, they are turned off for all services.
 - B.** When you're installing an application, most likely it will ask you when it is allowed to use location services.
 - C.** Some applications won't work without location services.
 - D.** You can turn location services on or off for applications in the settings of your device.
- 97.** You're at home binging on a popular Internet movie service and suddenly notice that the spinning wheel is showing up often, taking more time to download the movie than normal. What is likely the problem?
- A.** Your router needs to be reset.
 - B.** You have reached your data cap.
 - C.** Your laptop is overheating.
 - D.** The service is overwhelmed with requests.

- 98.** The executives at your company are concerned about employees using their personal devices for work. They worry that someone may leave and take proprietary information with them. You calm their fears by telling them that there are settings in place that protect company data that is accessed by employees. What are those settings called? (Choose two.)
- A.** MDM
 - B.** MAM
 - C.** GSM
 - D.** CDMA
- 99.** Which of the following is not a type of two-factor authentication?
- A.** Sending an access code via text message
 - B.** Using an authenticator application
 - C.** Needing a password and physical security key
 - D.** Needing a username and password
- 100.** Which cellular communication technology is known as Long-Term Evolution (LTE)?
- A.** 2G
 - B.** 3G
 - C.** 4G
 - D.** 5G
- 101.** Which of the following display types refers not to how the liquid crystals are arranged, but rather to the type of backlight being used?
- A.** LED
 - B.** OLED
 - C.** IPS
 - D.** TN
- 102.** You are responsible for replacement parts within your company's IT department. Because of the critical nature of your business, you need to have replacement parts on hand in the event of a hardware failure. Your company uses four different types of laptops, two HP and two Dell. How many different types of motherboards do you most likely need to stock?
- A.** One
 - B.** Two
 - C.** Three
 - D.** Four
- 103.** Tech support has recommended that you update the OS on your iPad to resolve a problem you're having with it. What OS will you be updating?
- A.** iPadOS
 - B.** OS X mobile
 - C.** watchOS
 - D.** iOS

- 104.** Your client is frustrated that their Bluetooth earpiece that was working yesterday is no longer working, and they've asked for your help. What is the likely source of the problem?
- A.** The earpiece has paired to a different device.
 - B.** The earpiece is broken.
 - C.** The Wi-Fi signal is weak.
 - D.** Bluetooth connectivity was lost.
- 105.** The Wi-Fi connection between your laptop and network has failed. Upon examining Device Manager you notice that the network card is not listed. You've reseated the card and it still isn't found in Device Manager, so you've decided to replace it. Which of the following card types will you likely need to purchase?
- A.** PCIe
 - B.** PCI
 - C.** M.2
 - D.** PCMCIA
- 106.** A technician needs to replace a hard drive that failed in their new laptop. What type of drive will they likely need? (Choose two.)
- A.** M.2
 - B.** mSATA
 - C.** 2.5"
 - D.** 3.5"

