

# IT Essentials (Version 8.0) Chapter 1 Exam Answers ITE v8.0

**1. A customer comes into a computer parts and service store. The customer is looking for a device to scan some old family photos into a laptop. What device should the store owner recommend to accomplish the required task?**

- magstripe reader
- projector
- joystick or gamepad
- **flatbed scanner**

**2. Which characteristic describes a SIMM?**

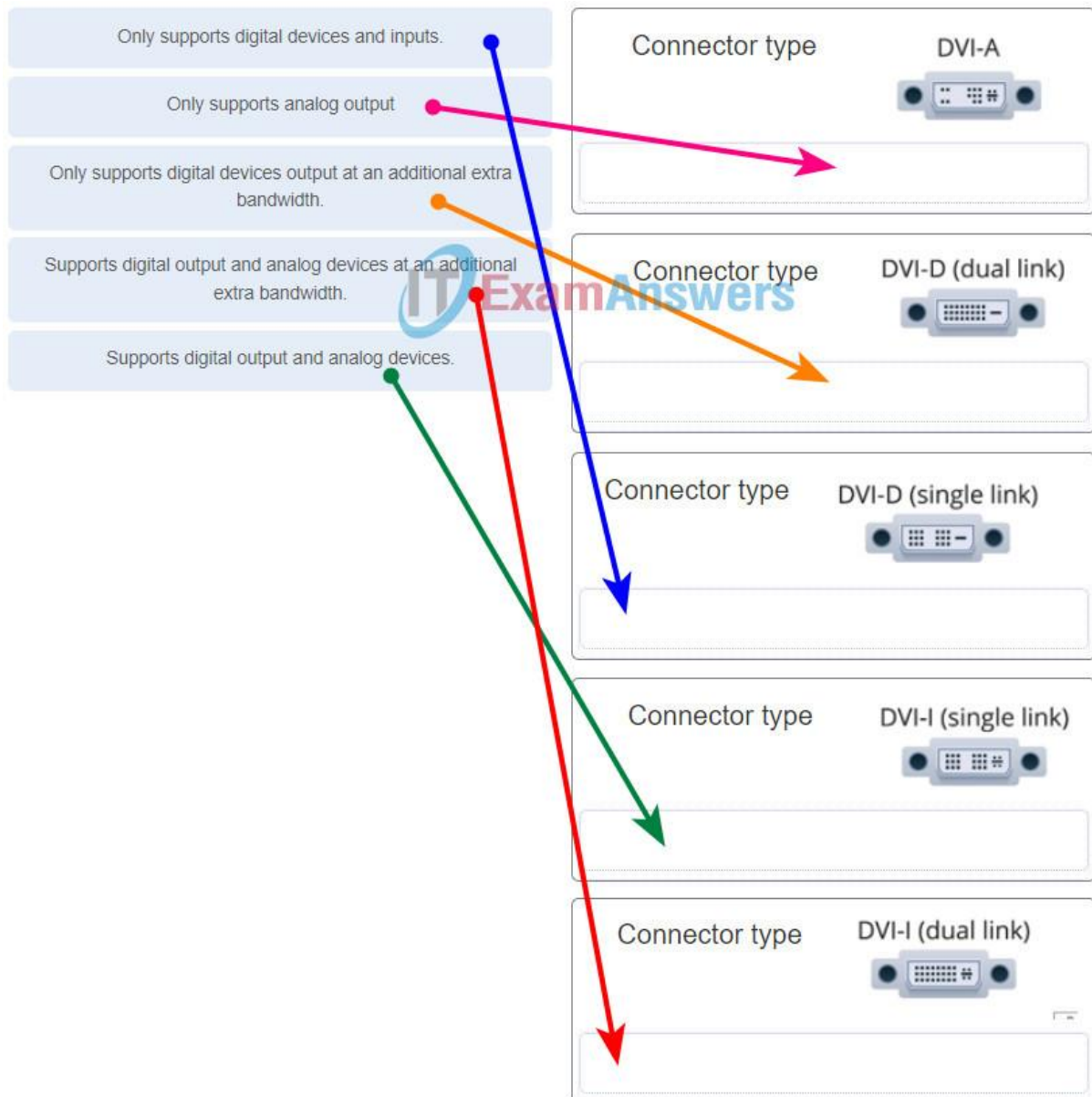
- an individual memory chip that has dual rows of pins used to attach it to the motherboard
- SRAM that is internal and integrated into the CPU
- a smaller, more condensed memory module that provides random access data storage, ideal for use in laptops, printers, and other devices where conserving space is desirable
- **a small circuit board that holds several memory chips and has a 30- or 72-pin configuration**

**3. What is the fastest type of memory technology?**

- Quadruple channel
- SODIMM
- Double channel
- **SRAM**

**Explanation:** The fastest memory is typically static RAM (SRAM), which is cache memory for storing the CPU's most recently used data and instructions. SRAM provides the processor with faster access to the data than retrieving it from the slower dynamic RAM (DRAM) or main memory.

**4. Match the supported description with the respective DVI image**



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**5. Which statement describes the proper use of an anti-static wrist strap?**

- **An anti-static wrist strap should make contact with the skin.**
- The anti-static wrist strip should not be attached to any grounded object.
- An anti-static wrist strap should not be used in conjunction with an antistatic mat.
- For optimum grounding, the clip should be attached to a painted section of the computer case.

**Explanation:** ESD can cause permanent damage to electrical components. An anti-static wrist strap must be worn and grounded when working on a PC. Computer case paints may not be conductive and thus it is better to ground the bare section of a computer case.

**6. Which type of memory is primarily used as cache memory?**

- **SRAM**
- RAM
- DRAM
- ROM

**7. Which two storage devices use a magnetic medium for storing data? (Choose two.)**

- **tape drive**
- compact disk drive
- solid state drive
- blue-ray disk drive
- **hard disk drive**

**Explanation:** A hard drive, or hard disk drive, is a magnetic storage device that is installed inside the computer. The hard drive is used as permanent storage for data.

A tape drive is a magnetic storage that is most often used for backup or archive data.

Magnetic tapes are used to store data via a magnetic read/write head.

**8. Which unit of measurement is used to indicate the hard drive speed?**

- pages per minute
- **revolutions per minute**
- clusters per minute
- gigabytes

**Explanation:** Revolutions per minute (RPM) is the speed at which the spindle in a hard drive spins. The faster the spindle spins, the faster the data can be retrieved from the platters.

**9. What three voltages are commonly provided by the power supply to the various components inside the computer? (Choose three.)**

- 24 volts
- **3.3 volts**
- 48 volts
- 9 volts
- **5 volts**
- **12 volts**

**Explanation:** Computer power supplies typically deliver three voltages to various components inside the computer. These are 3.3 volts for CPUs, 5 volts for motherboard components, and 12 volts for disk drive motors.

**10. A customer needs additional storage space on an older computer. What will the technician look at in the computer to determine if an additional hard drive can be added?**

- **an available PATA/SATA connection**
- the heat that is generated and air flow requirements
- BIOS version
- an open PCI/PCIe expansion slot
- adequate RAM

**Explanation:** PATA supports two devices per cable. PATA cables sometimes have only one device connector. A new PATA cable could be purchased that had two device connectors. Each SATA device, on the other hand, requires a SATA port and a SATA cable.

**11. Which component controls the communications and interactions between the CPU and other components on the motherboard?**

- CMOS
- BIOS
- **chipset**
- RAM

**Explanation:** The chipset controls communication between the CPU and other computer components.

**12. Which statement describes a characteristic of GDDR Synchronous Dynamic RAM?**

- **It is used in conjunction with a dedicated GPU.**
- It has a low power consumption and is used for cache memory.
- It processes massive amounts of data at the fastest speeds.
- It is used for main memory.

**Explanation:** GDDR Synchronous Dynamic RAM is specially designed for graphics and is used in conjunction with a GPU.

**13. Hard drives in a grocery warehouse keep failing because of vibrations in the warehouse environment. What would be a possible solution for this high failure rate?**

- Install each computer in a specialized high airflow case.
- **Install an SSD drive in each computer.**
- Install an antistatic mat under each computer.
- Install a more powerful power supply in each computer.

**Explanation:** SSD drives are an outstanding choice in extreme temperatures, in unusual environments, and in an environment where there are vibrations.

**14. Refer to the exhibit. Which two port types are shown in the graphic? (Choose two.)**



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- **network**
- modem
- **USB**
- parallel
- serial

**Explanation:** The port on the left is the USB port. The port on the right is the network port.

**15. From which type of data storage does the CPU load information for processing during normal operation?**

- ROM
- **RAM**
- SSD
- hard drive

**Explanation:** RAM is the temporary storage to which data and programs are loaded by the CPU for processing. ROM is read-only memory. Its content will not be altered by the CPU during normal operation. Both the hard drive and an SSD are data storage devices. The CPU will send data to them for storage or retrieve data from them and load into RAM for processing.

**16. Refer to the exhibit. Which type of adapter is shown?**



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- RAID
- sound
- **network interface**
- video

**Explanation:** The card that is shown in the exhibit is a network interface adapter with an RJ-45 port which is used to connect the computer to a network via a network cable.

**17. Which type of device would be used on a laptop to verify the identity of a user?**

- a MIDI device
- **a biometric identification device**
- a digitizer
- a touch screen

**Explanation:** As biometric identification devices, laptops commonly use a fingerprint scanner or, for facial recognition, a camera.

**18. What is an active cooling solution for a PC?**

- Add a heatsink to the CPU.
- Reduce the speed of the CPU.
- Use a painted computer case.
- **Add an additional case fan.**

**Explanation:** Active cooling solutions require power (like adding a case fan) while passive cooling solutions do not.

**19. Which tool can protect computer components from the effects of ESD?**

- **antistatic wrist strap**
- surge suppressor
- SPS
- UPS

**Explanation:** An antistatic wrist strap equalizes the electrical charge between the technician and the equipment and protects the equipment from electrostatic discharge.

**20. Which type of interface was originally developed for high-definition televisions and is also popular to use with computers to connect audio and video devices?**

- **HDMI**
- FireWire
- DVI
- VGA
- USB

**Explanation:** High definition multimedia interface, or HDMI, was originally a television standard. However, because it has many digital features, it is also a popular interface to connect audio and video devices to computers.

**21. Which statement describes a characteristic of SRAM in a PC?**

- It has the highest power consumption.
- **It is used for cache memory.**
- It has a connector with 240 pins.
- It is used as main RAM in a PC.

**Explanation:** SRAM is used for cache memory. It takes a small, but constant source of power to function.

**22. Why is it important to ground both computers and network devices?**

- to facilitate the flow of current from the power supply to the computer case
- **to provide a path of least resistance for stray current**
- to ensure that both the power supplied and the power used is in sync with the ground voltage
- to ensure that the power supply is limited to an output of 110V DC

**Explanation:** In the event of stray current being generated by a fault within the computer, the ground will provide a path of least resistance for the current to flow harmlessly away.

**23. Which characteristic describes EPROM?**

- SRAM that is internal and integrated into the CPU
- a smaller, more condensed memory module that provides random access data storage, ideal for use in laptops, printers, and other devices where conserving space is desirable
- **a chip that is nonvolatile and can be erased by exposing it to strong ultraviolet light**
- a small circuit board that holds several memory chips and has a 30- or 72-pin configuration

**24. A customer comes into a computer parts and service store. The customer is looking for a device to display a promotional presentation to a large audience at a conference. What device should the store owner recommend to accomplish the required task?**

- joystick or gamepad
- magstripe reader
- **projector**
- AR headset

**25. A customer comes into a computer parts and service store. The customer is looking for a device to provide secure access to the central server room using a retinal scan. What device should the store owner recommend to accomplish the required task?**

- **biometric scanner**

- keyboard
- NFC device
- flatbed scanner

**26. Which two activities are normally controlled by the Northbridge part of the chipset? (Choose two.)**

- communication between the CPU and the I/O ports
- **access to the RAM**
- **access to the video card**
- communication between the CPU and the hard drive
- communication between the CPU and the sound card

**Explanation:** The Northbridge chipset generally controls access to the RAM, video card, and the speeds at which the CPU can communicate with them.

**27. A customer comes into a computer parts and service store. The customer is looking for a device to manually input text for a new networking textbook that the customer is writing. What device should the store owner recommend to accomplish the required task?**

- biometric scanner
- NFC device
- flatbed scanner
- **keyboard**

**28. A customer comes into a computer parts and service store. The customer is looking for a device to allow users to tap and pay for their purchases. What device should the store owner recommend to accomplish the required task?**

- **NFC device**
- joystick or gamepad
- projector
- magstripe reader

**29. A customer comes into a computer parts and service store. The customer is looking for a device to help when repairing an airplane and that will allow the customer to see and interact with the repair manual at the same time. What device should the store owner recommend to accomplish the required task?**

- biometric scanner
- keyboard
- **AR headset**
- NFC device

**30. Which characteristic describes PROM?**

- chips that run at clock speeds of 800 MHz and have a connector with 240 pins
- chips specifically designed for video graphics that are used in conjunction with a dedicated GPU
- chips that require constant power to function and are often used for cache memory
- **chips that are manufactured blank and then can be programmed once by a PROM programmer**

**31. Which characteristic describes DDR3 SDRAM?**

- **chips that run at clock speeds of 800 MHz and have a connector with 240 pins**
- an individual memory chip that has dual rows of pins used to attach it to the motherboard



- a small circuit board that holds several memory chips and has a 30- or 72-pin configuration
- chips specifically designed for video graphics that are used in conjunction with a dedicated GPU

**32. A customer comes into a computer parts and service store. The customer is looking for a device to train pilots how to land and take off in a computer simulation environment. What device should the store owner recommend to accomplish the required task?**

- projector
- **joystick or gamepad**
- magstripe reader
- AR headset

**33. Which characteristic describes ROM?**

- chips that run at clock speeds of 800 MHz and have a connector with 240 pins
- chips specifically designed for video graphics that are used in conjunction with a dedicated GPU
- chips that require constant power to function and are often used for cache memory
- **a chip that cannot be erased or rewritten and is now obsolete**

**34. A customer comes into a computer parts and service store. The customer is looking for a device to help a person with accessibility issues input instructions into a laptop by using a pen. What device should the store owner recommend to accomplish the required task?**

- **stylus**
- biometric scanner
- keyboard
- NFC device

**35. Which characteristic describes ECC memory?**

- chips specifically designed for video graphics that are used in conjunction with a dedicated GPU
- **chips that can detect multiple bit errors and correct single bit errors in memory**
- an individual memory chip that has dual rows of pins used to attach it to the motherboard
- chips that run at clock speeds of 800 MHz and have a connector with 240 pins

**36. Which characteristic describes a DIP?**

- **an individual memory chip that has dual rows of pins used to attach it to the motherboard**
- chips that require constant power to function and are often used for cache memory
- chips that run at clock speeds of 800 MHz and have a connector with 240 pins
- chips whose contents can be “flashed” for deletion and are often used to store BIOS

**37. Which characteristic describes EPROM?**

- chips that run at clock speeds of 800 MHz and have a connector with 240 pins
- chips specifically designed for video graphics that are used in conjunction with a dedicated GPU
- chips that require constant power to function and are often used for cache memory



- **a chip that is nonvolatile and can be erased by exposing it to strong ultraviolet light**

**38.** A technician looks at a motherboard and sees a 24-pin connector. What component would connect to the motherboard through the use of this 24-pin connector?

- **power supply**
- video card
- PATA optical drive
- SATA drive
- floppy drive

**39.** Which two components usually interface directly with the Southbridge chipset on the motherboard? (Choose two.)

- **USB ports**
- video card
- RAM
- **hard drive**
- PCIe slots

**Explanation:** The Southbridge chipset allows the CPU to communicate with the hard drive and USB ports (and other I/O ports). CPU access to RAM, video card, and PCIe slots is provided by the Northbridge chipset.

**40.** A customer comes into a computer parts and service store. The customer is looking for a device to allow secure access to the main doors of the company by swiping an ID card. What device should the store owner recommend to accomplish the required task?

- joystick or gamepad
- projector
- AR headset
- **magstripe reader**

**41.** A customer comes into a computer parts and service store. The customer is looking for a device to allow secure access to the main doors of the company by swiping an ID card. What device should the store owner recommend to accomplish the required task?

- **magstripe reader**
- biometric scanner
- keyboard
- NFC device

**42.** A technician is building a thick client workstation that would be used to run a database and wants to ensure the best protection against errors. What type of memory would be best suited for this?

- RDRAM
- **ECC**
- DDR3
- DDR2

**Explanation:** RDRAM, DDR2, and DDR3 RAM do not offer any error correction abilities for data within the memory module. ECC RAM allows for the detection of multiple bit errors and correction of single bit errors within the memory modules.

**43.** Which adapter would a technician install in a desktop computer to enable a video signal to be recorded from a video recorder to the computer hard drive?

- **video capture card**

- video adapter
- TV tuner card
- network interface card

**Explanation:** A video capture card enables video to be saved as a file on the computer hard drive from a video recorder. A TV tuner card enables television signals to be received and viewed by the computer. A video adapter enables the computer to display computer output on a screen. A network interface card enables the computer to connect to a data network.

**44. Which characteristic describes GDDR SDRAM?**

- chips that require constant power to function and are often used for cache memory
- chips that run at clock speeds of 800 MHz and have a connector with 240 pins
- chips whose contents can be “flushed” for deletion and are often used to store BIOS
- **chips specifically designed for video graphics that are used in conjunction with a dedicated GPU**

**45. Which two devices are considered input devices? (Choose two.)**

- **biometric authentication device**
- **digital camera**
- printer
- projector
- speakers

**Explanation:** Biometric authentication devices and digital cameras are considered input devices. Speakers, projectors, and printers are all considered as output devices.

**46. A customer has a computer for a home business, but wants to have another computer as a web server. What would be the best solution for the customer to share the monitor, mouse, and keyboard between the two computers?**

- **KVM switch**
- access point
- multipurpose device
- network switch
- USB hub

**Explanation:** A KVM switch allows sharing the keyboard, video and mouse between computer systems.

**47. Which two statements describe a characteristic of GDDR Synchronous Dynamic RAM? (Choose two.)**

- **It processes massive amounts of data at the fastest speeds.**
- It is used for main memory.
- It has a low power consumption and is used for cache memory.
- **It is used in conjunction with a dedicated GPU.**

**Explanation:** GDDR Synchronous Dynamic RAM

- The “G” stands for Graphics
- RAM specifically designed for video graphics
- Used in conjunction with a dedicated GPU
- Family: GDDR, GDDR2, GDDR3, GDDR4, GDDR5
- Each family member improves performance
- Each family member lowers power consumption
- GDDR SDRAM processes massive amounts of data but not necessarily at the fastest speeds

# IT Essentials (Version 8.0) Chapter 2 Exam Answers ITE v8.0

**1. A technician is replacing a power supply. Which two factors should the technician consider when obtaining the replacement part? (Choose two.)**

- input voltage level of 12 or 5 VDC
- **wattage**
- **type of case**
- number of internal fans
- output voltage

**Explanation:** A technician should consider the following when choosing a power supply:

Type of motherboard

Wattage

Number and type of connectors

Type of case

The computer input power level is either 120 or 240 VAC. Output voltages are standard 3.3, 5, and 12 VDC. A power supply normally has one fan and this is not a selectable option on a fan.

**2. When a new PC is being built, which component has the most influence when selecting the case and power supply?**

- hard disk type
- **motherboard**
- RAM module
- sound card
- video card

**Explanation:** The choice of motherboard determines the type of case and power supply. The form factor of a motherboard must match the type of case and power supply. RAM modules, video cards, and sound cards are installed on the motherboard. They must be compatible with the motherboard. A hard disk is attached to the case, but the dimensions of the drive bays are standardized.

**3. Refer to the exhibit. Which device is shown?**



- SATA drive
- KVM switch
- **media reader**
- optical drive

**Explanation:** A media reader can be an external USB-attached device or an internal device used to read or write to media cards.

**4. What is a good safety precaution to take when opening a computer case?**

- **Place tape over the case edges that are sharp.**
- Remove the connections to the front panel before extending the case fully open.
- Remove the cover (or door) of the computer case before installing or removing parts.
- Ensure that any loose clothing such as a tie or shirt stay in constant contact with the case when handling internal components.

**Explanation:** Computer cases can easily be a hazard to technicians. Before working inside a computer, examine the case edges and put tape over any of the sharp edges to prevent physical harm. A case is opened, but seldom removed when installing or removing parts. Loose clothing should be secured before you work inside a computer.

**5. A student is looking to add memory in order to speed up a tower computer. Which type of memory module should the student be looking for?**

- **DIMM**
- DIP
- SIMM
- SODIMM

**Explanation:** Motherboards in tower computers accept dual inline memory modules (DIMMs) in the memory expansion slots. A motherboard supports a particular type of DIMM such as a DDR3 or DDR4 module.

**6. How is a power supply commonly attached to a tower case?**

- standoffs

- **screws**
- restraining strap
- retention bar

**Explanation:** To install a power supply into a PC tower case, open the case, align the power supply with the case holes, and use screws to attach the power supply to the case.

**7. Which two factors must be considered when replacing old RAM modules in a PC? (Choose two.)**

- **The speed of the new RAM must be supported by the chipset.**
- The power supply must provide the voltage that is required by the new RAM.
- The new RAM must be compatible with BIOS or UEFI.
- The new RAM must match the old RAM in terms of capacity and speed.
- **The new RAM must be compatible with the motherboard.**

**Explanation:** When the RAM on a motherboard is being replaced or upgraded, the new RAM module must be compatible with the current motherboard. In addition, the speed of the new RAM must be supported by the chipset.

**8. Which type of motherboard expansion slot sends data one bit at a time over a serial bus?**

- **PCIe**
- PCI
- RAM
- PATA

**Explanation:** A PCIe expansion slot connects to a serial bus that sends data one bit at a time at a much faster rate than the older PCI slot that connects to a parallel bus.

**9. Which type of drive is typically installed in a 5.25 inch (13.34 cm) bay?**

- hard drive
- SSD
- **optical drive**
- flash drive

**Explanation:** Optical drives are installed in 5.25 inch (13.34 cm) drive bays that are accessed from the front of the case. Flash drives typically connect to USB ports. SSDs and hard drives typically install in a 3.5 inch (8.9 cm) drive bay or a 5.25 inch (13.34 cm) drive bay that is not accessed from the front of the case. If the drive is smaller than the bay, a tray may be purchased.

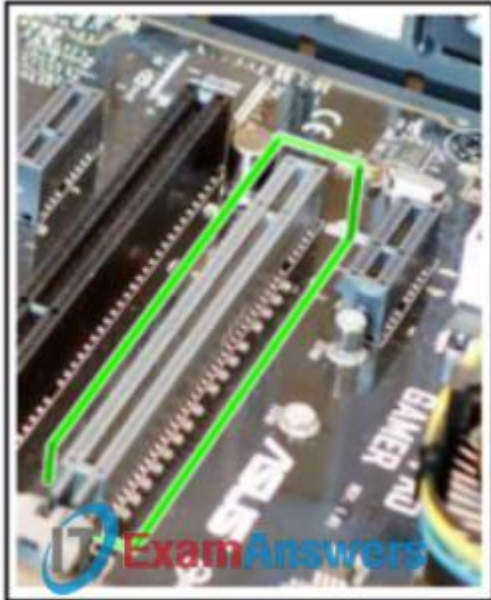
**10. A technician has been asked to order a replacement internal SATA HDD. Between which two form factors will the technician have to choose? (Choose two.)**

- 5.5 inch (13.97 cm)
- 2.25 inch (5.72 cm)
- **2.5 inch (6.35 cm)**
- **3.5 inch (8.89 cm)**

- 6.25 inch (15.88 cm)

**Explanation:** For tower computers, internal HDDs are available in the 3.5 and 2.5 inch (8.89 cm and 6.35 cm) form factors. SSDs tend to be the 2.5 inch form factor.

**11. Refer to the exhibit. Which type of expansion slot is shown?**



- **PCIe x16**
- AGP
- PCI
- memory

**Explanation:** The four expansion slots shown in the exhibit from left to right are the PCIe x1, PCI, PCIe x16, and PCIe x1.

**12. What does the “A” in P-A-S-S remind a person to do while using a fire extinguisher?**

- Adjust the pressure.
- Aim the fire extinguisher at the flames.
- **Aim the fire extinguisher at the base of the fire.**
- Activate the fire extinguisher.

**Explanation:** When using the P-A-S-S memory aid with a fire extinguisher, the “A” in P-A-S-S is for aiming at the base of the fire and not at the flames.

**13. Which statement describes the purpose of an I/O connector plate?**

- **It makes the I/O ports of the motherboard available for connection in a variety of computer cases.**
- It provides multiple connections for SATA hard drives to connect to the motherboard.
- It plugs into the motherboard and expands the number of available slots for adapter cards.
- It connects the PCIe adapter slots used for video directly to the CPU for faster processing.

**Explanation:** The I/O plate connects to the back of the case and has holes for each of the ports on the motherboard to push through, allowing the motherboard to be used in many different cases regardless of the number of ports on the board or their layout.

**14. Which type of motherboard expansion slot has four types ranging from x1 to x16 with each type having a different length of expansion slot?**

- AGP
- PCI
- SATA
- **PCIe**

**Explanation:** The PCIe, or PCI Express, bus has four types of expansion slots with varying lengths: x1, x4, x8, and x16.

**15. A technician is installing a new high-end video adapter card into an expansion slot on a motherboard. What may be needed to operate this video adapter card?**

- 24-pin ATX power connector
- PCI expansion slot
- **Two 8-pin power connectors**
- PCIe x 8 expansion slot

**Explanation:** When a high performance video adapter card is used, multiple power connectors may be required. These connectors may each use a 6-pin or 8-pin power connector. Video adapter cards commonly use the PCIe X 16 slot. A 24-pin ATX power connector is used to provide power to the motherboard.

**16. What is used to prevent the motherboard from touching metal portions of the computer case?**

- an I/O shield
- **standoffs**
- thermal compound
- ZIF sockets

**Explanation:** Screws and standoffs that are non-metallic may be insulators and protect against grounding.

**17. Where is buffered memory commonly used?**

- **servers**
- gaming computers
- gaming laptops
- business PCs
- tablets

**Explanation:** Buffered memory is used in computers that have a lot of RAM such as servers and high-end workstations. Buffered memory should be avoided in gaming, business, and home computers because it slows the memory speed.



18. Refer to the exhibit. In which section of the motherboard would a memory module be installed?



- section D
- **section C**
- section B
- section A

**Explanation:** Memory modules insert into memory expansion slots that have a retaining clip at each end of the slot.

19. While shopping for a replacement motherboard, a customer decides to also purchase a new mechanical hard drive and asks the technical salesperson for advice. Which storage interface should the salesperson recommend for the motherboard and new drive?

- RAID 5
- IDE
- **SATA**
- EIDE

**Explanation:** Mechanical hard drives today use SATA. Legacy PATA drives used IDE and EIDE. RAID 5 is a drive redundancy technology.

20. Which PC motherboard bus is used to connect the CPU to RAM and other motherboard components?

- PCI
- SATA

- **front-side**
- PCIe

**Explanation:** The front-side bus (FSB) is used to connect the CPU to RAM, expansion cards, and other motherboard components. The speed of this bus is relevant when selecting replacement motherboards and RAM.

**21. A technician has been asked to upgrade a processor and needs to do some research. The computer is just a couple of years old. What are two types of processor packages that could be used inside the computer? (Choose two.)**

- ISA
- **PGA**
- PCIe
- **LGA**
- GDDR

**Explanation:** Two architectures used with CPUs today are the pin grid array (PGA) and the land grid array (LGA). The PGA has pins on the bottom of the processor. The LGA has pins within the socket.

**22. What are three important considerations when installing a CPU on a motherboard? (Choose three.)**

- Maximum insertion force is applied to the load lever so the CPU is locked in place.
- **The CPU is correctly aligned and placed in the socket.**
- The CPU contacts are first cleaned with isopropyl alcohol.
- The CMOS EPROM battery is removed prior to installing the CPU.
- **Antistatic precautions are taken.**
- **The CPU heat sink and fan assembly are correctly installed.**

**Explanation:** The CPU is sensitive to static discharges. Its pins are very delicate and it works at high temperatures, so precautions must be taken. If the CPU has been used in another machine or if the fan is being replaced, you might need to remove the old thermal compound using isopropyl alcohol (not on the CPU contacts). The battery does not need to be removed from the motherboard during the CPU installation. This would cause the saved BIOS settings to be lost. Minimum force should be needed to lock the CPU load lever into place.

**23. A technician is selecting a PC that will be used by an employee who wants to share a keyboard and mouse among three devices. What is a major consideration that needs to be taken into account?**

- motherboard that supports dual-channeling
- smart card reader
- **KVM switch**
- Thunderbolt connector

**24. When assembling a PC, how is pin 1 identified on the front panel cables so that it can be aligned properly with pin 1 on the motherboard panel connector?**

- by a plus sign
- by a P1
- by a red cable
- **by a small arrow or notch**

**Explanation:** Each cable that connects to the front panel connector on the motherboard is marked with a small arrow to identify which pin is pin 1 so that it can be aligned with pin 1 on the panel.

**25. A technician is installing additional memory in a computer. How can the technician guarantee that the memory is correctly aligned?**

- **A notch in the memory module should be aligned with a notch in the memory slot.**
- The label on the memory module should always face the CPU.
- The arrows on the memory module should be aligned with the arrows on the motherboard slot.
- Memory slots are color coded, with one end red and one end blue.

**26. Which three components are usually installed on a PC motherboard before the motherboard is installed in the computer case? (Choose three.)**

- **CPU**
- **CPU heatsink and fan**
- **RAM**
- internal hard drives
- power supply
- optical drive
- adapter cards

**Explanation:** The CPU, CPU heatsink and fan, and RAM are usually installed on the motherboard before the motherboard is installed in the computer case. The power supply, optical drive, and internal hard drives are installed directly in the PC case. The adapter cards are installed onto the motherboard after it has been mounted in the case.

## IT Essentials (Version 8.0) Chapter 3 Exam Answers ITE v8.0

**1. A technician is selecting a server that will be used by a cloud provider to provide fault tolerance for large quantities of stored data. What is a major consideration that needs to be taken into account?**

- smart card reader
- **RAID**
- motherboard that supports dual-channeling
- Thunderbolt connector

**2. A data analyst has asked a technician to help protect locally stored data by installing a RAID. What is the minimum number of drives the technician has to install if configuring a RAID level 5?**

- 7
- 1
- **3**
- 10

**3. How should a technician dispose of an empty inkjet printer cartridge?**

- Give it back to the customer.
- Refill it.
- **Follow local regulations for disposal.**
- Throw it away.

**Explanation:** Refilling used inkjet cartridges is not recommended, as it may void the printer warranty and could leak ink, damaging the printer. Printer cartridges should be recycled, following the procedures established for recycling by the manufacturer. Because they are an environmental hazard, they should never be thrown away.

**4. What is indicated by the contrast ratio of a monitor?**

- **the difference in the intensity of light between the brightest white and darkest black that can be displayed**
- the ratio of the horizontal and vertical viewing areas of the monitor
- the total number of pixels that make up the picture
- how often the picture image is refreshed

**Explanation:** Contrast ratio is one of many factors that is used to describe the resolution of a monitor. Contrast ratio is a measure of the difference in intensity between white and black areas of the picture. A higher contrast ratio means the monitor can produce pictures with brighter whites and darker blacks.

**5. Which security feature in modern CPUs protects memory areas that contain part of the operating system from malware attacks?**

- **execute disable bit**
- LoJack
- encryption
- TPM

**Explanation:** The execute disable option can be turned on, if the feature is supported by the OS, to prevent malicious code from being executed inside a specific memory area that contains operating system files.

**6. What makes CRT monitor disposal dangerous for a technician who is handling the disposal?**

- potential health-damaging chemicals
- potential breathing hazards
- **potential residual high voltage**
- potential explosive materials

**Explanation:** CRT monitors do contain lead, barium, and rare earth metals that can be dangerous to the environment if not disposed of properly, but the danger to the technician is in the high voltage levels that can be stored even after powering off the monitor and disconnecting the power cord. A technician might be disposing of a CRT monitor that has the cover ajar or removed and be exposed to the high voltage.

**7. Which type of interface was originally developed for high-definition televisions and is also popular to use with computers to connect audio and video devices?**

- VGA
- DVI
- **HDMI**
- USB
- FireWire

**Explanation:** High definition multimedia interface, or HDMI, was originally a television standard. However, because it has many digital features, it is also a popular interface to connect audio and video devices to computers.

**8. A user playing a game on a gaming PC with a standard EIDE 5400 RPM hard drive finds the performance unsatisfactory. Which hard drive upgrade would improve performance while providing more reliability and more energy efficiency?**

- a 7200 RPM SATA hard drive
- a 7200 RPM EIDE hard drive
- a 10,000 RPM SATA hard drive
- **an SSD**

**Explanation:** Games require a lot of storage. In order for the computer to load and run games quickly, a fast hard drive will need to be installed. To obtain best performance an SSD (Solid-State Drive) will perform faster than an EIDE drive or a SATA drive.

**9. A technician has assembled a new computer and must now configure the BIOS. At which point must a key be pressed to start the BIOS setup program?**

- after the POST, but before Windows starts to load
- **during the POST**
- before the computer is powered on
- during the Windows load process

**Explanation:** To enter the BIOS setup program, you must press the proper key or key sequence during POST. Many motherboards will display graphics while the computer is checking hardware and waiting for the proper key press for the user to enter the BIOS.

**10. What electrical unit refers to the number of electrons moving through a circuit per second?**

- resistance
- **current**
- voltage

- power

**Explanation:** Current refers to the amount of electrons moving through a circuit per second and is measured in amperes or amps.

**11. What data is stored in the CMOS memory chip?**

- user login information
- device drivers
- Windows configuration settings
- **BIOS settings**

**Explanation:** The complementary metal-oxide semiconductor (CMOS) chip is a small memory chip located on the motherboard that is used to store saved BIOS settings.

**12. Which statement describes the capability of an HDMI version 1.4 type A port?**

- It supports high premium speeds of up to 48 Gbps.
- It uses a 20-pin connector for delivering high-bandwidth video and audio signals.
- **It can change a monitor's refresh rate to match the source device output rate.**
- It can be used for 4K and 8K resolutions.

**Explanation:** HDMI version 1.4 type A port is a standard HDMI port. It can change a monitor's refresh rate to match the source device output rate.

**13. Which condition refers to a reduced voltage level of AC power that lasts for an extended period of time?**

- spike
- sag
- surge
- **brownout**

**Explanation:** Surges and spikes are increased voltage levels. A sag is a short duration reduction in line voltage while a brownout is a reduction in voltage that occurs for an extended period of time.

**14. Which is a BIOS security feature that can prevent data from being read from a hard drive even if the hard drive is moved to another computer?**

- secure boot
- RAID
- BIOS passwords
- **drive encryption**

**Explanation:** There are several commonly available BIOS security features. Drive encryption is used to encrypt hard drives to prevent data access. Secure boot ensures that devices will only boot a trusted operating system. BIOS passwords allow different levels of BIOS access. RAID is not a BIOS security feature but rather provides redundancy and fault tolerance by using multiple hard drives.

**15. What characteristic of electricity is expressed in watts?**



- the amount of work required to move electrons through a circuit
- **the work required to move electrons through a circuit multiplied by the number of electrons flowing through a circuit per second**
- the amount of electrons flowing through a circuit per second
- the resistance to the flow of current in a circuit

**Explanation:** Watts is the unit used to measure the electrical power. Power refers to the work required to move electrons through a circuit multiplied by the number of electrons flowing through a circuit per second.

**16. What is one purpose of adjusting the clock speed within the BIOS configuration settings?**

- to disable devices that are not needed or used by the computer
- to change the order of the bootable partitions
- to allow a computer to run multiple operating systems in files or partitions
- **to allow the computer to run slower and cooler**

**Explanation:** The CPU clock speed can be adjusted up or down within the BIOS configuration settings. By lowering the clock speed, a CPU can run slower and cooler. Increasing the CPU clock speed makes the computer run faster and hotter.

**17. What are two reasons for installing a second hard disk drive inside an existing computer? (Choose two.)**

- to store BIOS configuration settings
- to allow access to a secondary display output
- **to store the system swap file**
- to increase CPU speed
- **to support a RAID array**

**Explanation:** The common reasons to install a second hard disk drive in a computer include: 1) increase storage space, 2) increase hard drive speed, 3) install a second operating system, 4) store the system swap file, 5) provide fault tolerance, and 6) backup the original hard drive.

**18. What is the purpose of LoJack?**

- It encrypts data on hard drives to prevent access without the correct password.
- **It allows the owner of a device to remotely locate, lock, or delete all files from the device.**
- It provides passwords for different levels of access to the BIOS.
- It ensures that a computer will only boot an operating system that is trusted by the motherboard manufacturer.

**Explanation:** The LoJack security feature protects against data theft if a device is stolen by allowing the owner to locate, lock, or delete all files on the device.

**19. A technician has just finished assembling a new computer. When the computer is powered up for the first time, the POST discovers a problem. How does the POST indicate the error?**



- **It issues a number of short beeps.**
- The LED on the front of the computer case flashes a number of times.
- It places an error message in the BIOS.
- It locks the keyboard.

**20. Which two considerations would be of the greatest importance when building a workstation that will run multiple virtual machines? (Choose two.)**

- water cooling
- **amount of RAM**
- powerful video card
- **number of CPU cores**
- high-end sound card

**Explanation:** Virtual computing requires more powerful hardware configurations because each installation needs its own resources and thus requires a lot of RAM and CPU processing power.

**21. Match the RAID technology terms to the description. (Not all options are used.)**

parity	provides fault tolerance for up to two failed drives
striping	double parity
mirroring	stores the same data on multiple drives simultaneously
duplexing	mirroring
double parity	enables data to be distributed across multiple drives
	striping
	provides basic error checking and fault tolerance by storing checksums separately from data
	parity

**22.** A technician has been asked to configure several computers with RAID. The customer wants to incorporate mirroring and striping as part of the RAID. Which RAID should the technician install?

- RAID 3
- RAID 4
- **RAID 10**
- RAID 2

**23.** Which two components are commonly replaced when a computer system with a newer motherboard is being upgraded? (Choose two.)

- hard disk drive
- **CPU**
- optical drive
- CMOS battery
- adapter card
- **RAM**

**Explanation:**When a motherboard is being upgraded to a newer version, both the CPU and RAM are commonly upgraded to support the motherboard compatibility requirements.

**24.** A technician has been asked to configure several computers with RAID. The customer needs protection if two drive fails and wants as much drive capacity as possible. Which RAID should the technician install?

- RAID 7
- RAID 8
- **RAID 6**
- RAID 4

**25.** A data analyst has asked a technician to help protect locally stored data by installing a RAID. What is the minimum number of drives the technician has to install if configuring a RAID level 10?

- 5
- 6
- 7
- **4**

**26.** A technician is selecting a PC that will be used by an employee who wants to share a keyboard and mouse among three devices. What is a major consideration that needs to be taken into account?

- UEFI BIOS
- **KVM switch**
- dual-fan power supply
- read-only memory modules

**27.** How does an inline UPS protect computer equipment against electrical power brownouts and blackouts?

- by grounding excess electrical voltage
- by switching from main power to a standby power source
- by stopping the flow of voltage to the computer
- **by using a battery to supply a constant level of voltage**

**Explanation:**Uninterruptible power supplies (UPS) contain a battery which is constantly providing a consistent level of voltage to the computer.

**28.** A technician has been asked to configure several computers with RAID. The customer wants the best RAID possible with three drives used. Which RAID should the technician install?

- RAID 3
- RAID 4
- **RAID 6**
- RAID 2

**29.** A technician is selecting a server that will be used by a cloud provider for data storage. What is a major consideration that needs to be taken into account?

- smart card reader
- Thunderbolt connector
- **multiple large hard drives**
- dual-fan power supply

**30.** A data analyst has asked a technician to help protect locally stored data by installing a RAID. What is the minimum number of drives the technician has to install if configuring a RAID level 1?

- 6
- 10
- 7
- **2**

**31.** A user reports that every morning when a particular computer is turned on, the configuration settings on that computer have to be reset. What action should be taken to remedy this situation?

- Replace the motherboard.
- Move the jumpers.
- **Replace the CMOS battery.**
- Upgrade the BIOS.

**Explanation:**BIOS information is maintained through the use of a CMOS battery. If the CMOS battery no longer provides power, configuration settings may be lost.

**32.** A technician is selecting a web server that will be used to host multiple gaming applications. What is a major consideration that needs to be taken into account?

- multiple SCSI drives
- **powerful processor**
- optical drive
- multiple touch screens

**33.** A technician has been asked to configure several computers with RAID. The customer wants data to be stored on two drives that are used to maximum capacity and does not care if a single drive fails, because data is backed up hourly. Which RAID should the technician install?

- RAID 8

- RAID 7
- **RAID 0**
- RAID 4

**34. A technician has been asked to configure several computers with RAID. The customer wants three drives to be used and protection if one drive fails. Which RAID should the technician install?**

- RAID 2
- RAID 4
- RAID 3
- **RAID 5**

**35. A technician is selecting a PC that will be used by a user as a thin client. What is a major consideration that needs to be taken into account?**

- multiple SCSI drives
- optical drive
- multiple touch screens
- **network connection to a server**

**36. What is a function of the BIOS?**

- enables a computer to connect to a network
- **performs a check on all internal components**
- provides temporary data storage for the CPU
- provides graphic capabilities for games and applications

**37. A technician is selecting a PC that will be used by a songwriter to mix tracks. What is a major consideration that needs to be taken into account?**

- dual-fan power supply
- smart card reader
- **specialized audio card**
- Thunderbolt connector

**38. A technician is selecting a laptop that will be used by a teleworker for connecting to the internet while traveling anywhere. What is a major consideration that needs to be taken into account?**

- **cellular card**
- Thunderbolt connector
- smart card reader
- dual-fan power supply

**39. A technician is selecting a PC that will be used by an employee who wants to share a keyboard and mouse among three devices. What is a major consideration that needs to be taken into account?**

- motherboard that supports dual-channeling
- **KVM switch**
- smart card reader
- Thunderbolt connector

**40. A technician has been asked to configure several computers with RAID. The customer needs protection for one drive failure and only has room in the computer for two drives. Which RAID should the technician install?**

- **RAID 1**
- RAID 7

- RAID 8
- RAID 4

**41. What is the advantage of having a redundant power supply?**

- It can be used to power high-performance graphic cards.
- It provides a Field Replacement Unit for immediate replacement in the event of a power supply failure.
- **It allows for the replacement of the faulty power supply without loss of power to the server.**
- It can be linked to increase the wattage required for the newer processors.

**Explanation:** A redundant power supply is hot-swappable. This allows the faulty power supply to be replaced without losing power to the computer.

**42. A data analyst has asked a technician to help protect locally stored data by installing a RAID. What is the minimum number of drives the technician has to install if configuring a RAID level 6?**

- 3
- **4**
- 7
- 10

**43. A technician has been asked to configure several computers with RAID. The customer needs protection if one drive fails, fast access, and drive capacity. Which RAID should the technician install?**

- RAID 4
- RAID 2
- RAID 3
- **RAID 5**

**44. A technician has been asked to configure several computers with RAID. The customer wants data to be stored on three drives and protection for one drive failure. Which RAID should the technician install?**

- RAID 2
- RAID 8
- **RAID 5**
- RAID 7

## IT Essentials (Version 8.0) Chapter 4 Exam Answers ITE v8.0

**1. An employee reports that the antivirus software cannot obtain updates. The support technician notices that the license for the software has expired. The technician adds a new license to the software and completes the update service. What should the technician do next?**

- Review the Event Viewer for the date and time that the last software update was performed.

- Download advanced antivirus software from another vendor.
- Record the new license number in the log.
- **Run a full virus scan on the computer.**

**Explanation:** After the repairs have been completed, continue the troubleshooting process by verifying full system functionality and implementing any needed preventive measures.

**2. A technician is troubleshooting a 4-year-old computer that takes a long time to boot, and identifies that the BIOS rediscovers all the hardware at every boot. What action would fix this problem?**

- Launch Device Manager to discover new hardware.
- Reset the BIOS using the CMOS jumper.
- **Replace the CMOS battery.**
- Start the computer with the last known good configuration.

**Explanation:** The CMOS battery helps the BIOS to keep the discovered hardware as non-volatile information. The Device Manager will discover new hardware in the operating system. Resetting the BIOS using the CMOS jumper will erase the stored information about the hardware found. The last known good configuration is used to restore the operating system to the last working state.

**3. During what step in the troubleshooting process does the technician demonstrate to the customer how the solution corrected the problem?**

- Establish a theory of probable cause.
- **Document the findings, actions, and outcomes.**
- Verify full system functionality.
- Establish a plan of action to resolve the problem.

**Explanation:** Once all repairs have been made, the last step of the troubleshooting process is to verify to the customer the problem and the solutions and demonstrate how the solution corrected the problem.

**4. An employee reports that each time a workstation is started it locks up after about 5 minutes of use. What is the most likely cause of the problem?**

- The RAM is malfunctioning.
- **The CPU is overheating.**
- The power supply fails to provide adequate voltage and current.
- The hard disk is failing.

**Explanation:** Processor problems are often caused by faulty installations, incorrect CMOS setup, inadequate cooling and ventilation, and BIOS compatibility issues.

**5. A user has noticed that the hard drive LED on the front of the computer has stopped working. However, the computer seems to be functioning normally. What is the most likely cause of the problem?**

- The motherboard BIOS needs to be updated.
- **The hard drive LED cable has come loose from the motherboard.**
- The power supply is not providing enough voltage to the motherboard.

- The hard drive data cable is malfunctioning.

**Explanation:** Each light on the front of the case is powered by the motherboard through a cable that attaches somewhere on the board. If this cable comes loose, a particular light on the front of the case will not work.

**6. During the troubleshooting of a PC that will not boot, it is suspected that the problem is with the RAM modules. The RAM modules are removed and put into another PC, which successfully powers on. The RAM modules are then put back into the original PC and it now successfully powers on as well. What was the most likely cause of the problem?**

- The RAM modules have bad blocks.
- The RAM modules were inserted backwards into the DIMM slots.
- **The RAM modules were not seated firmly.**
- The RAM modules did not match the PC specs.

**Explanation:** If RAM is not seated firmly in the motherboard DIMM slots, it will not function properly. RAM cannot be inserted backwards into a DIMM slot because both the RAM chip and the slot are keyed so they only fit one way.

**7. What component is most suspect if a burning electronics smell is evident?**

- RAM module
- CPU
- hard drive
- **power supply**

**Explanation:** A burning electronics smell is often detected when a power supply is overloaded and damaged.

**8. What is a primary benefit of preventive maintenance on a PC?**

- It simplifies PC use for the end user.
- **It extends the life of the components.**
- It assists the user in software development.
- It enhances the troubleshooting processes.

**Explanation:** Preventive maintenance helps reduce software and hardware problems by preventing undue wear on components, thereby extending the life of the components. It also assists in identifying failed components that require replacement, such as cooling fans.

**9. When troubleshooting a computer, where can a technician find updated information about errors caused by the system, the user, or the software?**

- vendor diagnostic tools
- **Event Viewer**
- the BIOS
- Device Manager

**Explanation:** Information about errors caused by the system, user, or software can be found in Event Viewer. Event Viewer is an application that records detailed information about problems including: What problem occurred and the date and time of the occurrence. The severity and source of the problem. An event ID assigned to the problem. The user who was logged in when the problem occurred.



**10. An employee reports that the output of a workstation display is distorted. The technician checks the manufacturer website and downloads the latest version of the video driver. After the video driver is installed, what should the technician do next?**

- Schedule the next system checkup with the employee.
- Move the display card to another slot to see if the video performs better.
- **Open a video editing application to verify the video performance.**
- Log the previous and current version numbers of the video driver.

**Explanation:** After the repairs have been completed, continue the troubleshooting process by verifying full system functionality.

**11. What is the best way to determine if a CPU fan is spinning properly?**

- **Visually inspect the fan when the power is on to ensure it is spinning.**
- Listen for the sound of the fan spinning when the power is on.
- Spray compressed air on the fan to make the blades spin.
- Spin the blades of the fan quickly with a finger.

**Explanation:** Spinning the fan blades with the power off, especially by using compressed air, can damage the fan. The best way to ensure the fan is working is to visually inspect it with the power on.

**12. A technician is performing hardware maintenance of PCs at a construction site. What task should the technician perform as part of a preventive maintenance plan?**

- Back up the data, reformat the hard drive, and reinstall the data.
- **Remove dust from intake fans.**
- Perform an audit of all software that is installed.
- Develop and install forensic tracking software.

**Explanation:** Construction sites are normally very dusty environments. The accumulation of dust in a PC can lead to failure of various components. There is a high risk of overheating due to cooling fans failing because of excessive dust buildup. The technician should ensure that all dust is removed from the intake fans as part of the maintenance process.

**13. What are three benefits of computer preventive maintenance? (Choose three.)**

- improvement in RAM access time
- elimination of the need for repairs
- time savings for technicians making repairs
- **reduction in the number of equipment failures**
- **improvement in data protection**
- **extension of the life of components**

**Explanation:** Preventive maintenance can reduce the need for future repairs, but cannot eliminate them entirely. Preventive maintenance does not affect a technician making repairs. Preventive maintenance has no effect on RAM

access time. The remaining options are all benefits of performing preventive maintenance.

**14. What is the purpose of documenting the information that is obtained from the customer in the work order?**

- to create a centralized database of possible problems
- to use the information for marketing purposes
- to keep track of parts that are ordered
- **to use the information to aid in solving the problem**

**Explanation:** It is always important to document the information that is obtained from the customer in the work order and repair journal. This information can assist in solving the problem. The information can also be useful if another technician is assigned to the case or for future problems.

**15. A computer technician performed a number of actions to correct a problem. Some actions did not solve the problem, but eventually a solution was found. What should be documented?**

- only the failed attempts, so that future technicians will know what not to try
- **everything that was done to try to solve the problem**
- only the solution, because this solved the problem
- a description of the problem and solution

**Explanation:** Everything that was done to solve a problem should be documented, including failed attempts and the eventual solution. A description of the problem would have been previously documented.

**16. What should a technician do before beginning any troubleshooting steps on a customer computer?**

- Identify the problem.
- Document the findings.
- Establish a plan of action.
- **Perform a data backup.**

**Explanation:** Because a technician could be held liable for any data loss as a result of working on a customer computer, a backup should be performed before beginning any troubleshooting.

**17. A web designer installed the latest video editing software and now notices that when the application loads, it responds slowly. Also the hard disk LED is constantly flashing when the application is in use. What is a solution to solve the performance problem?**

- upgrading to a faster CPU
- replacing the video card with a model that has a DVI output
- **adding more RAM**
- replacing the hard disk with a faster model

**Explanation:** RAM problems are often caused by faulty RAM modules, loosely seated modules, an inadequate amount of RAM, and compatibility issues. When there is not enough RAM in the computer, data needs to be swapped

often between the RAM and the hard disk (indicated by hard disk LED constantly flashing), which significantly slows down data access speeds.

**18. In which step of the troubleshooting process would a technician have to do more research on the Internet or within the computer manual in order to solve a problem?**

- Test the theory to determine the cause.
- Document findings, actions, and outcomes.
- Identify the problem.
- **Establish a plan of action to resolve the problem and implement the solution.**
- Verify full system functionality and, if applicable, implement preventive measures.

**Explanation:** Once the cause of the problem is determined, a technician should research possible solutions, sometimes by visiting various web sites and consulting with manuals.

**19. If a technician is unable to create a backup of data on a customer computer, what three pieces of information should the technician include on the liability release form signed by the customer before beginning work? (Choose three.)**

- the steps required to resolve the problem
- **permission to work on the computer without a current backup available**
- **a description of the work to be performed**
- **a release from liability if data is lost or corrupted**
- a description of the problem
- the components used in the repair

**Explanation:** If there is not a current backup of the data and the technician is not able to create one, then a liability release form signed by the customer should contain the following information: Permission to work on the computer without a current backup available Release from liability if data is lost or corrupted Description of the work to be performed

**20. After consulting the manufacturer manuals, a technician applies a series of recommended solutions that resolve a problem with a workstation computer. What is the next step in the troubleshooting process that the technician should perform?**

- Document the findings, actions, and outcomes.
- Test the theory of probable cause.
- Determine the next steps to resolve the problem.
- **Verify the solution and confirm full system functionality.**

**Explanation:** After the recommended solutions have been applied to resolve the problem, full system functionality should be verified and preventive measures implemented if applicable. This would be followed by documenting the solution and actions. Determining the next steps to resolve the problem

and testing the theory of probable cause have already been completed in this scenario.

**21. Which two types of data should be backed up before troubleshooting a computer for a customer? (Choose two.)**

- **Internet Explorer favorites files**
- BIOS system file
- Windows operating system files
- **documents that are created by the customer**
- driver files for the hard disk

**Explanation:** Only customer created data is necessary for backup as a precaution to the troubleshooting process.

**22. A helpdesk technician takes a call, “Good morning, this is the helpdesk. My name is Greg. How may I help you today?” The frantic caller states, “My computer will not turn on and I have a presentation in 15 minutes.” The technician responds, “Now calm down and let us see what we can do.” The technician then proceeds to lead the caller through the process of checking power cables and power lights. Which troubleshooting step is being used at this point?**

- Establish a plan of action to resolve the problem.
- Implement a solution.
- Establish a theory of probable cause.
- **Identify the problem.**
- Verify full system functionality and, if applicable, implement preventive measures.

**Explanation:** By leading the caller through the a series of steps the technician is attempting to identify what the caller means by saying that “the computer will not turn on.” Once the problem is identified, then a probable cause can be established and a solution developed and implemented.

**23. A specific computer has an issue that could not be resolved by the help desk technician. The on-site technician finds that Windows updates have been disabled. The technician re-enables the update service, configures the computer for automatic updates, downloads and installs all missing updates, ensures the computer boots successfully, and verifies with the customer that the issue has been resolved. Which step, if any, is next?**

- No further action is needed.
- Establish a plan of action to resolve the problem and implement the solution.
- Verify full system functionality and, if applicable, implement preventive measures.
- **Document the findings, actions, and outcomes.**
- Test the theory to determine the cause.

**Explanation:** No technical job is finished until the documentation is complete.

**24. A customer asks for a solution to a printer problem that is beyond the knowledge level of the technician. What should the technician do?**

- Try to fix the problem anyway.
- Tell the customer to call the printer manufacturer to fix the problem.
- Ask the customer to call again when another technician can provide a solution to the problem.
- **Gather as much information as possible and escalate the problem.**

**Explanation:** Trying to fix a problem that is beyond the knowledge level of the technician may create additional problems.

**25. What is the next step after a possible solution is implemented during a troubleshooting process?**

- **Verify the full system functionality and apply maintenance procedures.**
- Test another possible solution.
- Identify other possible causes for the problem.
- Document the cause and the solution for the problem.

**Explanation:** After the repairs have been completed, continue the troubleshooting process by verifying full system functionality and implementing any needed preventive measures.

**26. A technician needs to purchase a storage drive that both connects directly to the PCIe bus and provides reliability. Which type of storage device would best meet these requirements?**

- 2.5" HDD
- 2.5" SSD
- tape drive
- **NVMe M.2**

**Explanation:** An NVMe M.2 device is a type of SSD that attaches to the PCIe bus without requiring SATA connectors or special drivers.

## IT Essentials (Version 8.0) – ITE 8.0 Certification Checkpoint Exam Chapters 1 – 4 Answers

**1. A user is building a new computer system. Why would the user select a DDR3?**

- to diminish any electrostatic charge
- to attach a laser printer
- **to install a memory module**
- to attach a VR headset

**2. What characteristic best describes an AR headset?**

- **a head-mounted device that superimposes images and audio over a real world image and can provide users immediate access to information about their real surroundings**
- an output device that uses LED, LCD, or OLED technology

- a head-mounted device that provides head-motion and eye-tracking sensors and displays three-dimensional images
- an output device used to present information from a laptop onto a screen

**3. A technician has installed a new second hard drive in a tower computer, but the drive does not show up in the BIOS. What are two things the technician should check first? (Choose two.)**

- The drive works in another computer.
- The power supply outputs enough wattage.
- **Data and power cables are attached.**
- The drive has been partitioned.
- **The drive port is enabled in the BIOS.**

**Explanation:** If the BIOS cannot detect a drive, either the port is disabled in the BIOS or the cables are not attached securely. A tower computer can typically have a second hard drive installed without any power issues. The drive cannot be partitioned or formatted until the BIOS recognizes it.

**4. Where would a technician use an RG-6 cable?**

- when connecting a display to a PC
- when attaching a PC to a LAN
- **when replacing cable TV cabling**
- when attaching an external hard drive

**Explanation:** RG-6 is a type of coaxial cable used in cable TV installations.

**5. A user is building a custom computer system and is trying to decide on components for the new system. The user does light to medium graphic design, programming, and gaming. Which two components would be appropriate for this type of machine? (Choose two.)**

- integrated CPU
- maximum CPU cores
- **dedicated video card**
- **SSD**
- high speed mechanical drive

**Explanation:** Both a gaming and graphic design computer should have an SSD and high-end video card. The computer should have a multicore CPU, but this computer does not require the maximum number of cores that a virtualization computer would need.

**6. A technician is installing memory into a computer and notices that there are two black memory slots and two blue memory slots. Which memory technology does this motherboard use?**

- ECC
- parity
- **dual channel**
- DDR4

**Explanation:** Motherboards that support dual channel frequently color the memory slots so the technician knows to populate the same color slots with a matching pair of memory modules.

**7. A user reports that when games are being played, the computer displays random blotches on the screen. What are two possible causes? (Choose two.)**

- bad inverter
- failing power supply
- failing LCD backlight
- **loose video cable**
- **GPU overheating**

**Explanation:** Artifacts such as dots, lines, or patterns on a screen are typically caused by a failing video card, an underpowered or overheated GPU, a loose video cable, overclocked CPU, or outdated video driver.

**8. A technician needs to purchase a storage drive that both connects directly to the PCIe bus and provides reliability. Which type of storage device would best meet these requirements?**

- tape drive
- 2.5" SSD
- **NVMe M.2**
- 2.5" HDD

**Explanation:** An NVMe M.2 device is a type of SSD that attaches to the PCIe bus without requiring SATA connectors or special drivers.

**9. Which statement describes a feature of SDRAM?**

- It is able to support two writes and two reads per CPU clock cycle.
- It requires constant power to function.
- Its connector always has 240 pins.
- **It can process overlapping instructions in parallel.**

**Explanation:** SDRAM ( Synchronous Dynamic RAM) works in synchronization with the memory bus and has higher transfer rates because it can process overlapping instructions in parallel.

**10. A technician is asked to configure a laptop for LoJack. What will the technician have to do to accomplish this task?**

- Attach a physical cable through a special hardware loop that is part of the computer case.
- Install antimalware software.
- Perform special steps on the hard drive using the Disk Management tool.
- **Enable it in BIOS.**

**Explanation:** LoJack is a security option that can be enabled and used to track a stolen device such as a laptop.



**11. Match the memory type to the feature. (Not all options are used.)**

DDR SDRAM	It's connector has 288 pins and has advanced error correction features available.
DDR3 SDRAM	
GDDR SDRAM	DDR4 SDRAM
DDR2 SDRAM	It's connector has 184 pins and is able to support two writes and two reads per CPU clock cycle.
DDR4 SDRAM	
	
	DDR SDRAM
	It's connector has 240 pins and consumes 1.5 Volts of power.
	DDR3 SDRAM
	It's connector has 240 pins and consumes 1.8 Volts of power.
	DDR2 SDRAM

- It's connector has 288 pins and has advanced error correction features -> **DDR4 SDRAM**
- It's connector has 184 pins and is able to support two writes and two reads per CPU clock cycle. -> **DDR SDRAM**
- It's connector has 240 pins and consumes 1.5 Volts of power. -> **DDR3 SDRAM**
- It's connector has 240 pins and consumes 1.8 Volts of power. -> **DDR2 SDRAM**

**12. A technician is researching how to troubleshoot a computer that reboots randomly. The research suggests that the technician should check the computer for distended capacitors. Where should the technician look for these?**

- under the CPU
- **on the motherboard**
- on the memory module
- within the power supply

**Explanation:** Distended capacitors are motherboard components that look like they are bulging. They can leak and cause motherboard issues.

**13. A company is deploying both thin and thick client computers. Which configuration step will a technician need to do on the thin clients that will most likely not be done on the thick clients?**

- Connect the computer to the LAN.
- **Connect the computer to the application server.**
- Install additional RAM.
- Install local applications.

**Explanation:** A thick client is a normal corporate workstation. A thin client is usually a monitor, keyboard, mouse, and a computer with few or no ports and no hard drive. A thin client runs applications and possibly even the operating system from a centralized device such as a server. A corporate technician commonly uses imaging software to install both, but a thin client requires the technician to make the connection to an application server.

**14. A user has the following requirements for a RAID drive:**

- It must be magnetic.
- It must be fast.
- It must fit into a standard tower case.

**Which drive type would meet the user requirements?**

- **3.5 inch 15K drive**
- SSD
- NVMe
- BD-RE

**Explanation:** A 3.5 inch drive is commonly used in a tower computer. 15 K is commonly used to represent 15,000 rpm drives which are very fast magnetic drives. Blu-ray drives are not used in a RAID configuration. SSD and NVMe use flash memory and are not mechanical drives.

**15. What characteristic best describes a barcode scanner?**

- an input device that provides verification of package delivery by digitizing a written name
- a head-mounted device that superimposes images and audio over a real world image and can provide users immediate access to information about their real surroundings
- **an input device that reads barcodes affixed to most retail products**
- an output device used to present information from a laptop onto a screen

**16. What characteristic best describes a stylus?**

- an input device often used to provide secure access to locations or devices by using voice, facial, or fingerprint recognition
- an input device allowing users to pay for a product by tapping their credit card or smartphone on another device
- an input device that reads barcodes affixed to most retail products
- **a pen-like tool that allows input by touching the surface of the screen**

**17. A user is building a new computer system. Why would the user select a straight-through cable?**

- to install an EEPROM
- to diminish any electrostatic charge
- **to connect a device to a wired network**
- to attach an external HD

**18. A user is building a new computer system. Why would the user select two hard drives?**

- to share input devices between two monitors
- to attach a laser printer
- **to configure a RAID**
- to attach a VR headset

**19. A user is building a new computer system. Why would the user select a DVI to VGA adaptor?**

- to connect a Bluetooth device
- to attach a laser printer
- to attach a VR headset
- **to attach to an analog monitor**

**20. What characteristic best describes a flatbed scanner?**

- an input device for playing games and flight simulation applications
- a device that allows the use of one set of keyboard, mouse, and monitor to control multiple computers
- **an input device that digitizes an image by placing the document on a flat glass surface and scanning from underneath**
- the first type of input device used to navigate the graphical user interface

**21. A user is building a new computer system. Why would the user select a PCIe x16 expansion slot?**

- to install a GRU
- **to install a video card**
- to attach a laser printer
- to attach a VR headset

**22. A user is building a new computer system. Why would the user select external screws?**

- to attach an external HD
- to configure a gaming console
- **to install a power supply into a PC tower case**
- to diminish any electrostatic charge

**23. What characteristic best describes a KVM switch?**

- an input device often used to provide secure access to locations or devices by using voice, facial, or fingerprint recognition
- an input device allowing users to pay for a product by tapping their credit card or smartphone on another device
- an input device that reads barcodes affixed to most retail products
- **a device that allows the use of one set of keyboard, mouse, and monitor to control multiple computers**

**24. A user is building a new computer system. Why would the user select a 24-pin connector?**

- to replace a heatsink
- to diminish any electrostatic charge
- **to attach power to the motherboard**
- to attach an external HD

**25. What characteristic best describes a projector?**

- an input device allowing users to pay for a product by tapping their credit card or smartphone on another device
- an input device that reads barcodes affixed to most retail products
- an input device that reads encoded information from the back of plastic cards
- **an output device used to present information from a laptop onto a screen**

**26. What characteristic best describes a VR headset?**

- **a head-mounted device that provides head-motion and eye-tracking sensors and displays three-dimensional images**
- an output device that uses LED, LCD, or OLED technology
- an output device used to present information from a laptop onto a screen
- a head-mounted device that superimposes images and audio over a real world image and can provide users immediate access to information about their real surroundings

**27. What characteristic best describes a touch screen?**

- an input device often used to provide secure access to locations or devices by using voice, facial, or fingerprint recognition
- an input device allowing users to pay for a product by tapping their credit card or smartphone on another device
- an input device that reads barcodes affixed to most retail products
- **an input device that recognizes touch and pressure as instructions**

**28. What characteristic best describes a magstripe reader?**

- an input device that provides verification of package delivery by digitizing a written name
- a head-mounted device that superimposes images and audio over a real world image and can provide users immediate access to information about their real surroundings
- **an input device that reads encoded information from the back of plastic cards**
- an output device used to present information from a laptop onto a screen

**29. What characteristic best describes a monitor?**

- an output device used to present information from a laptop onto a screen

- a head-mounted device that superimposes images and audio over a real world image and can provide users immediate access to information about their real surroundings
- **an output device that uses LED, LCD, or OLED technology**
- a head-mounted device that provides head-motion and eye-tracking sensors and displays three-dimensional images

**30. A user is building a new computer system. Why would the user select an RG-6 cable?**

- to install a GRU
- **to replace cable TV cabling**
- to attach a laser printer
- to attach a VR headset

**31. What characteristic best describes a signature pad?**

- a head-mounted device that superimposes images and audio over a real world image and can provide users immediate access to information about their real surroundings
- an output device used to present information from a laptop onto a screen
- **an input device that provides verification of package delivery by digitizing a written name**
- an output device that uses LED, LCD, or OLED technology

**32. What characteristic best describes a joystick?**

- **an input device for playing games and flight simulation applications**
- an output device used to present information from a laptop onto a screen
- an output device that uses LED, LCD, or OLED technology
- a head-mounted device that superimposes images and audio over a real world image and can provide users immediate access to information about their real surroundings

**33. A user is building a new computer system. Why would the user select a DDR4?**

- to attach an external HD
- to attach a laser printer
- to configure a gaming console
- **to install a memory module**

**34. What characteristic best describes a keyboard?**

- an input device that provides verification of package delivery by digitizing a written name
- **the first type of input device used for creating documents and emails**
- a head-mounted device that superimposes images and audio over a real world image and can provide users immediate access to information about their real surroundings
- an output device used to present information from a laptop onto a screen

**35. What characteristic best describes a biometric scanner?**

- an input device that digitizes an image by placing the document on a flat glass surface and scanning from underneath
- an input device for playing games and flight simulation applications
- the first type of input device used to navigate the graphical user interface
- **an input device often used to provide secure access to locations or devices by using voice, facial, or fingerprint recognition**

**36. A user is building a new computer system. Why would the user select three hard drives?**

- to share input devices between two monitors
- **to configure a RAID**
- to attach a laser printer
- to attach a VR headset

## **IT Essentials (Version 8.0) Chapter 5 Exam Answers ITE v8.0**

**1. A technician is searching through a storage locker and finds a firewall. What is the purpose of this device?**

- **It is placed between two or more networks and protects data and equipment from unauthorized access.**
- It is a device that uses existing electrical wiring to connect devices and sends data using specific frequencies.
- It is a device that can be inserted in the middle of a cable run to add power.
- It connects a home or business network to a company that provides internet connectivity as well as television signals.

**2. Which type of server would be used to keep a historical record of messages from monitored network devices?**

- print
- DNS
- authentication
- **syslog**
- DHCP

**Explanation:** A syslog server is used as a centralized location for logged messages from monitored network devices.

**3. Which two types of signal interference are reduced more by STP than by UTP? (Choose two.)**

- white noise
- dispersion
- **EMI**
- **RFI**

- MDF

**Explanation:** RFI, EMI, and crosstalk cause interference to the electrical signals that are transmitted through copper cables. Both UTP and STP use twisted pairs of wires that help protect against crosstalk. However, STP provides greater protection against RFI and EMI than UTP provides.

#### 4. What is a characteristic of a WAN?

- **It connects multiple networks that are geographically separated.**
- It spans across a campus or city to enable sharing of regional resources.
- It is typically owned and managed by a single home or business.
- It requires a wireless access point to connect users to the network.

**Explanation:** A WAN (wide-area network) is used to connect networks that are geographically separated and is typically owned by a service provider. The service provider contracts out WAN services to individuals and organizations.

#### 5. A network specialist has been hired to install a network in a company that assembles airplane engines. Because of the nature of the business, the area is highly affected by electromagnetic interference. Which type of network media should be recommended so that the data communication will not be affected by EMI?

- UTP
- STP
- **fiber optic**
- coaxial

**Explanation:** Optical fiber uses light to transmit signals. Therefore, fiber-optic cable is not affected by EMI or RFI.

#### 6. Which device provides wireless connectivity to users as its primary function?

- router
- modem
- **access point**
- switch

**Explanation:** A switch connects multiple devices to a network. A router will forward traffic between networks. A wireless router will connect multiple wireless devices to a network. An access point will provides wireless connectivity to multiple devices and has fewer features than a wireless router. A modem will connect a home or small office to the Internet.

#### 7. A customer is considering a multipurpose device to create a home network. Which three devices are usually integrated into a multipurpose network device? (Choose three.)

- email server
- **switch**
- **wireless access point**
- print server
- **router**



- web server

**Explanation:** A web server could be software installed on a computer. An email server is commonly provided by a provider like Google or Yahoo or built and provided in a corporate environment. Print servers are commonly found in a business, not home, environment.

**8. Which two devices are commonly powered by PoE? (Choose two.)**

- router
- modular switch
- core switch
- **IP phone**
- **access point**

**Explanation:** Compact switches, APs, and IP phones can be powered by a PoE-enabled switch. Routers and modular switches require a large amount of energy and cannot be powered through an Ethernet cable.

**9. Which pairs of wires change termination order between the 568A and 568B standards?**

- blue and brown
- **green and orange**
- green and brown
- brown and orange

**Explanation:** The difference between the 568A and 568B standards is the order in which the colored wire pairs are sequenced. It is the green and the orange pairs of wires that are swapped between the two standards.

**10. Which smart home wireless technology has an open standard that allows up to 232 devices to be connected?**

- **Z-Wave**
- Zigbee
- 802.11n
- 802.11ac

**Explanation:** Z-Wave is used with smart homes to create a wireless network that can connect up to 232 devices. Z-Wave uses the 908.42 MHz frequency band.

**11. Which network device allows administrators to remotely manage many devices through one dashboard interface?**

- powerline networking
- Power over Ethernet
- switch that supports VLANs
- **cloud-based network controller**

**Explanation:** A cloud-based network controller allows a technician to control, configure, and monitor network devices such as access points or switches.

**12. What type of connector is used to connect an analog modem to a telephone line socket?**

- BNC

- ST
- **RJ-11**
- RJ-45

**Explanation:** For dial-up Internet service, the modem is connected to the telephone line socket via an RJ-11 connector.

**13. Which satellite service can support up to approximately 100 Mbps with much lower latency than standard satellite?**

- ADSL
- DSL
- **LEO**
- Broadband

**Explanation:** A new type of satellite service called LEO (Low Earth Orbit) can support up to approximately 100 Mbps. This is a much lower latency than standard satellites, which provide between 100 and 200 ms.

**14. Which technology is most often used to connect devices to a PAN?**

- IEEE 802.11n wireless
- coaxial cabling
- **Bluetooth**
- fiber optic cabling

**Explanation:** A personal-area network (PAN) connects wireless devices that are within close proximity of an individual person. Bluetooth network technology commonly provides the connectivity.

**15. How many devices can a Bluetooth device connect to simultaneously?**

- 127
- 24
- 5
- 10
- **7**

**Explanation:** Bluetooth is a short range wireless technology that is used for personal area network (PAN) devices such as cell phones, keyboards, headsets, and mice. A Bluetooth device can connect to a maximum of seven other devices using this 2.4 GHz technology.

**16. Which IEEE standard operates at wireless frequencies in both the 5 GHz and 2.4 GHz ranges?**

- 802.11a
- **802.11n**
- 802.11b
- 802.11g

**Explanation:** The 802.11n standard is backwards compatible with both the 802.11a and 802.11b standards and therefore operates at both 5 GHz and 2.4 GHz.

**17. Which device acts as a termination point for cable runs and keeps cables secure and safely out of walkways?**

- access point
- KVM switch
- UTM
- **patch panel**

**18. Which internet connection type is an always-on service that uses radio signals sent from a tower to a receiver in a home or business?**

- hotspot
- satellite
- cellular
- **line of sight wireless**

**Explanation:** In addition to providing internet connectivity from a home or business, line of sight wireless may also be used to connect to other towers or to connect to some other type of backbone connection.

**19. What is the correct order of the layers of the TCP/IP model from the top layer to the bottom?**

- network access, transport, internet, application
- application, internet, network access, transport
- **application, transport, internet, network access**
- application, session, network, data link, physical

**Explanation:** The OSI model has 7 layers and the TCP/IP model has 4. Both models encapsulate data from the sender and prepare it for transport to a receiver over some type of network

**20. What is a feature of a dial-up connection?**

- the use of different frequencies to carry voice and data signals on the copper telephone wire
- the use of multiple channels which can carry different types of services
- **the use of an analog modem to transmit data over voice telephone lines**
- the use of different frequencies to send multiple signals over the same medium

**Explanation:** Dial-up Internet connections use a modem to send data over analog telephone lines.

**21. A user needs to access the Internet from home. Which device is needed if a user connects to an ISP through the telephone network?**

- **DSL modem**
- server
- wireless access point
- switch

**Explanation:** ISPs offer Internet access connection to homes through the telephone network with DSL technology. A user can connect to an ISP through the telephone network using a DSL modem. A wireless access point connects mobile devices to a local network.

**22. A client packet is received by a server. The packet has a destination port number of 389. What service application is the client requesting?**

- NetBIOS (NetBT)
- HTTP
- **LDAP**
- POP3

**23. A client packet is received by a server. The packet has a destination port number of 22. What service application is the client requesting?**

- SMB/CIFS
- HTTPS
- **SSH**
- SLP

**24. Which network device makes forwarding decisions based on the destination MAC address that is contained in the frame?**

- **switch**
- repeater
- hub
- router

**Explanation:** Switches are the central connection point for a LAN and they maintain a MAC address table. The MAC address table has a port number associated with a MAC address for each particular device. The switch inspects a frame to look at the destination MAC address. The switch then looks in its MAC address table and if that MAC address is found, the switch forwards the data to the port that is associated with that particular MAC address.

**25. Which type of server would support the SMTP, POP, and IMAP protocols?**

- DHCP
- proxy
- **email**
- syslog

**Explanation:** The Simple Mail Transfer Protocol (SMTP) is used to send email. The Post Office Protocol (POP) and Internet Message Access Protocol (IMAP) are used to retrieve email. All three protocols are application layer protocols.

**26. Which type of connection to the Internet is capable of the fastest transfer rates?**

- ISDN
- POTS
- **fiber**
- satellite
- cable

**Explanation:** Refer to the chapter graphics to see the various connectivity types and speeds.

**27. Which well-known port number is used by the DHCP (client) protocol?**

- 67

- 20
- 80
- **68**
- 53

**Explanation:** DHCP is a very important protocol that is used to provide IP addressing information to network clients. The DHCP server uses UDP port 67 and the network host uses UDP port 68.

**28. A technician is searching through a storage locker and finds a DSL modem. What is the purpose of this device?**

- It is placed between two or more networks and protects data and equipment from unauthorized access.
- **It connects the network of a user to the digital infrastructure of a phone company, providing always-on service.**
- It is an all-in-one security appliance that includes IDS/IPS functionality as well as stateful firewall services.
- It connects networks and forwards traffic to remote networks by using IP addressing information.

**29. A technician with a PC is using multiple applications while connected to the Internet. How is the PC able to keep track of the data flow between multiple application sessions and have each application receive the correct packet flows?**

- The data flow is being tracked based on the destination MAC address of the technician PC.
- The data flow is being tracked based on the source IP address that is used by the PC of the technician.
- The data flow is being tracked based on the destination IP address that is used by the PC of the technician.
- **The data flow is being tracked based on the source port number that is used by each application.**

**Explanation:** The source port number of an application is randomly generated and used to individually keep track of each session connecting out to the Internet. Each application will use a unique source port number to provide simultaneous communication from multiple applications through the Internet.

**30. Which network device would be the most appropriate to provide stateful packet filtering, email filtering, and VPN services?**

- **UTM**
- router
- endpoint management server
- proxy server
- TPM

**Explanation:** A universal threat management (UTM) device is an all-in-one security device that can provide firewall, proxy filtering, email filtering, and network access control services as well as be a point where remote users connect to the company using a VPN.

**31. A client packet is received by a server. The packet has a destination port number of 21. What service application is the client requesting?**

- LDAP
- SLP
- SNMP
- **FTP**

**32. When would a printer be considered a network host?**

- when it is connected to a workstation
- when it is connected to a laptop
- when it is connected to a PC
- **when it is connected to a switch**

**Explanation:** When a printer is connected directly to a networking device, such as a hub, switch, or router, it is considered to be a network host.

**33. A technician is searching through a storage locker and finds a PoE injector. What is the purpose of this device?**

- **It is a device that can be inserted in the middle of a cable run to add power.**
- It is a device that allows a network administrator to manage many remote networking devices from a central location.
- It connects the network of a user to the digital infrastructure of a phone company, providing always-on service.
- It connects a home or business network to a company that provides internet connectivity as well as television signals.

**34. A client packet is received by a server. The packet has a destination port number of 143. What service application is the client requesting?**

- SMB/CIFS
- **IMAP**
- HTTPS
- SLP

**35. A client packet is received by a server. The packet has a destination port number of 23. What service application is the client requesting?**

- SMB/CIFS
- HTTPS
- **Telnet**
- SLP

**36. A client packet is received by a server. The packet has a destination port number of 25. What service application is the client requesting?**

- SMB/CIFS
- HTTPS
- SLP
- **SMTP**

**37. A client packet is received by a server. The packet has a destination port number of 137. What service application is the client requesting?**

- SMB/CIFS
- HTTPS

- **NetBIOS (NetBT)**
- SLP

**38. A client packet is received by a server. The packet has a destination port number of 53. What service application is the client requesting?**

- NetBIOS (NetBT)
- **DNS**
- POP3
- IMAP

**39. A technician is searching through a storage locker and finds a managed switch. What is the purpose of this device?**

- It is an all-in-one security appliance that includes IDS/IPS functionality as well as stateful firewall services.
- It provides a wired or wireless connection between end devices, switches, and routers and in some cases, can regenerate weak signals.
- It is placed between two or more networks and protects data and equipment from unauthorized access.
- **It connects multiple end devices and can be configured for VLANs and port security.**

**40. A technician is searching through a storage locker and finds a Powerline networking connector. What is the purpose of this device?**

- **It is a device that uses existing electrical wiring to connect devices and sends data using specific frequencies.**
- It is placed between two or more networks and protects data and equipment from unauthorized access.
- It is an all-in-one security appliance that includes IDS/IPS functionality as well as stateful firewall services.
- It connects networks and forwards traffic to remote networks by using IP addressing information.

**41. A technician is searching through a storage locker and finds a cable modem. What is the purpose of this device?**

- **It connects a home or business network to a company that provides internet connectivity as well as television signals.**
- It is placed between two or more networks and protects data and equipment from unauthorized access.
- It is an all-in-one security appliance that includes IDS/IPS functionality as well as stateful firewall services.
- It connects networks and forwards traffic to remote networks by using IP addressing information.

**42. A client packet is received by a server. The packet has a destination port number of 161. What service application is the client requesting?**

- SMB/CIFS
- HTTPS
- **SNMP**
- SLP



**43. A technician is searching through a storage locker and finds an unmanaged switch. What is the purpose of this device?**

- It is an all-in-one security appliance that includes IDS/IPS functionality as well as stateful firewall services.
- It provides a wired or wireless connection between end devices, switches, and routers and in some cases, can regenerate weak signals.
- **It is a device whose sole purpose is to connect end devices and to microsegment a LAN.**
- It is placed between two or more networks and protects data and equipment from unauthorized access.

**44. What is a common function of a proxy server?**

- to control who is permitted to access the internal network
- to detect malicious signatures by monitoring traffic that is entering the internal network
- **to store frequently accessed web pages on the internal network**
- to provide access to a shared pool of configurable computing resources

**Explanation:** A proxy server is often responsible for caching web pages frequently accessed by internal users. If another internal user requests any of the stored pages, the proxy server can quickly provide the stored web pages to the internal user instead of sending the request over the Internet to the original web server.

**45. A technician is searching through a storage locker and finds an access point. What is the purpose of this device?**

- **It uses radio waves to provide network access to wireless devices.**
- It is an all-in-one security appliance that includes IDS/IPS functionality as well as stateful firewall services.
- It provides a wired or wireless connection between end devices, switches, and routers and in some cases, can regenerate weak signals.
- It is placed between two or more networks and protects data and equipment from unauthorized access.

**46. A technician is searching through a storage locker and finds a Cisco ASA 5505-X (UTM). What is the purpose of this device?**

- It connects a home or business network to a company that provides internet connectivity as well as television signals.
- It is a device that uses existing electrical wiring to connect devices and sends data using specific frequencies.
- It is a device that can be inserted in the middle of a cable run to add power.
- **It is an all-in-one security appliance that includes IDS/IPS functionality as well as stateful firewall services.**

**47. A technician is searching through a storage locker and finds a cloud-based network controller. What is the purpose of this device?**

- It transfers small amounts of DC current over Ethernet cables to power low voltage devices such as wireless access points and
- **It is a device that allows a network administrator to manage many remote networking devices from a central location.**
- surveillance cameras.
- It provides a wired or wireless connection between end devices, switches, and routers and in some cases, can regenerate weak signals.
- It is a device that can be inserted in the middle of a cable run to add power.

**48. A technician is searching through a storage locker and finds an Ethernet NIC. What is the purpose of this device?**

- It connects a home or business network to a company that provides internet connectivity as well as television signals.
- **It is needed to connect a computer to a wired local-area network.**
- It is a device that uses existing electrical wiring to connect devices and sends data using specific frequencies.
- It is a device that can be inserted in the middle of a cable run to add power.

**49. A technician is searching through a storage locker and finds a router. What is the purpose of this device?**

- It is an all-in-one security appliance that includes IDS/IPS functionality as well as stateful firewall services.
- It provides a wired or wireless connection between end devices, switches, and routers and in some cases, can regenerate weak signals.
- **It connects networks and forwards traffic to remote networks by using IP addressing information.**
- It is placed between two or more networks and protects data and equipment from unauthorized access.

**50. A technician is searching through a storage locker and finds a patch panel. What is the purpose of this device?**

- **It provides a wired or wireless connection between end devices, switches, and routers and in some cases, can regenerate weak signals.**
- It is a device that can be inserted in the middle of a cable run to add power.
- It is a device that uses existing electrical wiring to connect devices and sends data using specific frequencies.
- It connects a home or business network to a company that provides internet connectivity as well as television signals.

**51. Which IEEE standard is used for PoE?**

- **802.3af**
- 802.11af
- 802.1q
- 802.15

**Explanation:** 802.3af is an IEEE standard for PoE. Other PoE standards are 802.3at and 802.3bt. 802.11af is a wireless LAN standard. 802.1q is a standard specifying the tagging of VLAN frames across a trunk link. 802.15 is the IEEE standard for personal area networks that includes Bluetooth.

**52. A technician is searching through a storage locker and finds a wireless NIC. What is the purpose of this device?**

- **It is needed to connect a computer or smart device to an 802.11 network.**
- It connects a home or business network to a company that provides internet connectivity as well as television signals.
- It is a device that uses existing electrical wiring to connect devices and sends data using specific frequencies.
- It is a device that can be inserted in the middle of a cable run to add power.

**53. A technician is searching through a storage locker and finds a repeater. What is the purpose of this device?**

- **It is used to regenerate weak signals to extend the distance a signal can travel.**
- It is a legacy device used to divide LANs into network segments, filtering traffic between those LAN segments.
- It is a legacy device that connects end devices and where traffic from one connected device floods out to every other connected device.
- It connects multiple end devices and can be configured for VLANs and port security.

## **IT Essentials (Version 8.0) Chapter 6 Exam Answers ITE v8.0**

**1. Which network protocol is used to automatically assign an IP address to a computer on a network?**

- APIPA
- **DHCP**
- ICMP
- SMTP
- FTP

**Explanation:** A Dynamic Host Configuration Protocol (DHCP) server automatically assigns IP addresses, simplifying the addressing process. FTP manages file transfers. SMTP sends email. ICMP is a messaging protocol that is used in troubleshooting. APIPA is Automatic Private IP Addressing, a Windows operating feature that allows DHCP clients to obtain addresses even when a DHCP server is not present.

2. After having talked to the customer, a network technician suspects that an invalid IP address is the most likely cause of a network issue. Which step of the troubleshooting process does this represent?

- Identify the problem.
- Establish a plan of action to resolve the problem and implement the solution.
- **Establish a theory of probable cause.**
- Test the theory to determine the cause.

**Explanation:** Before a solution can be proposed or tested, the technician has to first talk to the customer to identify the problem, and establish a theory of probable cause.

3. A PC is not able to connect to a wired network. Pinging the loopback address is successful, but the gateway cannot be reached. On the network switch all the interface lights are on, except for the interface connected to the PC. The LED on the network card is off. What is the most likely cause of this problem?

- **The network cable is faulty.**
- The network switch is faulty.
- The PC has an incorrect IP address for the DNS server.
- The gateway needs to be fixed.

**Explanation:** The network card is working if the loopback address can be pinged. The LED on the network card being off points towards a faulty cable or a bad connection.

4. The current IP configuration of a small company is done manually and is time-consuming. Because of increased network growth, a technician needs a simpler way for IP configuration of workstations. Which service would simplify the workstation IP configuration task?

- APIPA
- **DHCP**
- DIPS
- ICMP

**Explanation:** In networks with more than a few hosts, DHCP simplifies the addressing process. A DHCP server automatically assigns host IP addresses.

5. Which filtering method uses the physical address to specify exactly which device is allowed or blocked from sending data on a network?

- port triggering
- **MAC address filtering**
- port forwarding
- whitelisting

**Explanation:** MAC address filtering specifies exactly which device MAC addresses are allowed to or blocked from sending data on your network.

6. Which IPv6 address represents the most compressed form of the IPv6 address 2001:0db8:cafe:0000:0835:0000:0000:0aa0/80?

- 2001:db8:cafe:0000:0835::aa0/80

- 2001:0db8:cafe:0000:0835::0aa/80
- **2001:db8:cafe:0:835::aa0/80**
- 2001:db8:cafe::0835::aa0/80
- 2001:0db8:cafe:0000:0835::0aa0/80

**Explanation:** There are two rules that exist to help in the reduction of the number of digits within an IPv6 address: Rule 1 is used to remove any leading 0s. After applying rule 1 to 2001:0db8:cafe:0000:0835:0000:0000:0aa0/80, we calculate the outcome as 2001:db8:cafe:0:835:0:0:aa0/80. Rule 2 is used to replace any group of consecutive zeros once throughout the IPv6 address. After applying rule 2 to 2001:db8:cafe:0:835:0:0:aa0/80, we calculate the outcome as 2001:db8:cafe:0:835::aa0/80.

**7. A technician is configuring the channel on a wireless router to either 1, 6, or 11. What is the purpose of adjusting the channel?**

- to enable different 802.11 standards
- to disable broadcasting of the SSID
- to provide stronger security modes
- **to avoid interference from nearby wireless devices**

**Explanation:** Channels 1, 6, and 11 are selected because they are 5 channels apart, thus minimizing the interference with adjacent channels. A channel frequency can interfere with channels on either side of the main frequency. All wireless devices need to be used on nonadjacent channels.

**8. Multiple users report that the workstations are assigned a 169.254.x.x IP address. The users are able to communicate only between each other. What is a possible solution?**

- Verify the network cable on all user machines.
- Statically configure a default gateway on each workstation.
- Restart the DNS server.
- **Restart the DHCP server.**

**Explanation:** When a network device automatically obtains the IP address 169.254.x.x, it is unable to receive an IP address from a DHCP server. The DHCP server should be restarted to ensure that it is operational.

**9. Users in a recently installed wireless network are complaining of slow data transfer and frequent loss of connectivity. The technician checks that the wireless security is correctly implemented, and there is no evidence of unauthorized users on the network. Which two problems might the technician suspect? (Choose two.)**

- The network passwords need to be reissued to the users.
- **The wireless signal is too weak.**
- The antenna on the access point is too powerful.
- The DHCP server is faulty.
- **There is interference from outside sources.**

**Explanation:** Normally, the closer a wireless NIC is to an access point, the faster the connectivity. This problem does not require the network password to be reissued. The combination of the low bandwidth and the intermittent

connectivity is pointing towards a weak signal or interference from outside sources.

**10. Port triggering has been configured on a wireless router. Port 25 has been defined as the trigger port and port 113 as an open port. What effect does this have on network traffic?**

- **All traffic that is sent out port 25 will open port 113 to allow inbound traffic into the internal network through port 113.**
- All traffic that is sent into port 25 to the internal network will also be allowed to use port 113.
- Any traffic that is using port 25 going out of the internal network will also be allowed to transmit out port 113.
- Any traffic that comes into port 25 allows outgoing port 113 to be used.

**Explanation:** Port triggering is used to allow inbound traffic through the firewall based on outbound traffic. The trigger occurs when an application makes use of a specific port on the internal network. An external port on the firewall is then opened. This allows for temporary passage of traffic through inbound ports to a specific device.

**11. Which type of network requires an active, powered TAP (test access point) to capture network traffic?**

- **gigabit Ethernet**
- load balanced
- 10 Megabit Ethernet
- wireless

**Explanation:** The complexity of gigabit signalling, and some fiber links, require the use of an active TAP (test access point) to capture network traffic. 10 Megabit Ethernet network traffic can be captured using a passive (TAP). Wireless network traffic is captured with a wireless network card, and load balancing does not determine the type of traffic capture used.

**12. A device has been assigned the IPv6 address of 2001:0db8:cafe:4500:1000:00d8:0058:00ab/64. Which is the host identifier of the device?**

- 00ab
- 2001:0db8:cafe:4500
- 2001:0db8:cafe:4500:1000:00d8:0058:00ab
- **1000:00d8:0058:00ab**

**Explanation:** The address has a prefix length of /64. Thus the first 64 bits represent the network portion, whereas the last 64 bits represent the host portion of the IPv6 address.

**13. Which is an obsolete and insecure Windows network protocol only required on operating systems earlier than Windows 2000?**

- **NetBIOS**
- TCP/IP
- BIOS



- SMB

**Explanation:** NetBIOS is an obsolete and insecure Windows network protocol only required on operating systems earlier than Windows 2000. SMB (Server Message Block) is the protocol used for file and printer sharing on Windows networks. BIOS is the Basic Input/Output System stored in firmware and has been replaced by UEFI. TCP/IP (Transmission Control Protocol/Internet Protocol) is a suite of networking protocols that has replaced NetBIOS.

**14. A wired network is undergoing several changes that could leave it vulnerable to connection by unauthorized devices while the work is in progress. Which two temporary measures would enable the authorized devices to continue to have network access but prevent unauthorized devices from connecting? (Choose two.)**

- Disable DNS.
- Subnet the network.
- Disable SSID broadcast.
- **Disable DHCP.**
- **Assign static IP addresses to the authorized devices.**

**Explanation:** Disabling DHCP and assigning static IP addresses only to authorized devices will prevent unauthorized devices from automatically obtaining IP address information. Without the correct IP address information, the unauthorized devices will not be able to communicate over the network. Disabling DNS will result in all connected devices no longer automatically being able to communicate with network resources by name (IP addresses would have to be used.), but will not prevent unauthorized devices from connecting and enabling potentially malicious access from occurring. Subnetting the network will change the range of IP addresses used but not prevent unauthorized network access. Disabling SSID broadcasts is only applicable to wireless networks, not wired networks.

**15. What security technique could provide secure access to a server located in a small office without the expense of implementing a DMZ or purchasing a hardware firewall?**

- **implement port forwarding**
- implement hash encoding for all wireless devices
- implement basic security on all wireless access points
- implement MAC address filtering

**Explanation:** Port forwarding provides a rule-based method to direct traffic between devices on separate networks. This method provides access to devices across the Internet in a less expensive way than using a DMZ.

**16. Which network server is malfunctioning if a user can ping the IP address of a web server but cannot ping the web server host name?**

- the DHCP server
- the HTTP server
- **the DNS server**
- the FTP server



**Explanation:** If pings are successful to an IP address but not to a host name, then the problem may be that a DNS server cannot be accessed.

**17. A network technician is checking a computer to see if the DHCP client is working correctly. The technician issues the ipconfig /all command. Which two parameters should the technician review? (Choose two.)**

- media state
- description
- host name
- **subnet mask**
- **default gateway**

**Explanation:** A DHCP server can provide several parameters such as IP address, subnet mask, default gateway, and other optional parameters. The host name, media state, and description are present even if a DHCP server is not found.

**18. A technician is troubleshooting a problem where the user claims access to the Internet is not working, but there was access to the Internet the day before. Upon investigation, the technician determines that the user cannot access the network printer in the office either. The network printer is on the same network as the computer. The computer has 169.254.100.88 assigned as an IP address. What is the most likely problem?**

- **The computer cannot communicate with a DHCP server.**
- The IP default gateway on the computer is incorrect.
- The router that connects this network to other networks is down.
- The network interface card driver needs to be updated.

**Explanation:** In a network employing dynamic IP addressing, if a computer cannot communicate with the DHCP server to obtain an IP address, the Windows operating system automatically assigns a link-local IP, which is in the range of 169.254.0.0 to 169.254.255.255. In this case, the computer can only communicate with computers connected to the same network within this IP address range.

**19. What is the correct compressed format of the IPv6 address 2001:0db8:eeff:000a:0000:0000:0000:0001?**

- 2001:db8:eeff:a:1
- **2001:db8:eeff:a::1**
- 2001:db8:eeff:a:::1
- 2001:db8:eeff:a::0001

**Explanation:** There are two rules for IPv6 address compression. Rule 1: leading zeros in any hextet can be removed. Rule 2: contiguous hextets of all zeros can be compressed to a double colon. Rule two can only be applied once.

**20. A technician troubleshooting a network problem has used CLI commands to determine that a computer has not been allocated a correct IP address from the DHCP server. Which command can the technician use to solve this problem?**

- ipconfig /release
- ping
- **ipconfig /renew**
- tracert

**Explanation:** The command ipconfig /renew will cause the computer to request a new IP address from the DHCP server. The command ipconfig /release will remove the current IP address but will not request a new address. The commands ping and tracert are used to test network connectivity.

**21. What two default wireless router settings can affect network security? (Choose two.)**



- **The SSID is broadcast.**
- MAC address filtering is enabled.
- WEP encryption is enabled.
- The wireless channel is automatically selected.
- **A well-known administrator password is set.**

**Explanation:** Default settings on wireless routers often include broadcasting the SSID and using a well-known administrative password. Both of these pose a security risk to wireless networks. WEP encryption and MAC address filtering are not set by default. The automatic selection of the wireless channel poses no security risks.

**22. How many bits are used to represent the host address of a computer with the IP address of 192.168.1.25 and a subnet mask of 255.255.255.0?**

- 32
- 128
- **8**
- 4

**23. How many bits are used to represent the network address of a host with an IP address of 192.168.150.16 and a subnet mask of 255.255.0.0?**

- 128
- 32
- **16**
- 42

**24. A group of users is unable to connect to the network. When testing several of the PCs and issuing the command ipconfig, the technician notices**

that all of them have an IP address in the 169.254.x.x range. What is the most likely cause of this problem?

- The Internet connection is down.
- The gateway address is incorrect.
- The DNS server is not operational.
- **The DHCP server is not operational.**

**Explanation:** If the PCs are not able to connect to a DHCP, they will be allocated an IP address within the range 169.254.0.0 – 169.254.255.255.

25. How many bits are used to represent the OUI part of the MAC address of a NIC card?

- 8
- 128
- **24**
- 42

26. What is the proper CIDR prefix notation for a subnet mask of 255.0.0.0?

- /16
- /24
- /32
- **/8**

**Explanation:** The proper CIDR notation for a subnet mask of 255.0.0.0 is /8. This is because the /8 indicates that the first eight bits of the subnet mask are set to binary 1.

27. How many bits are used to represent a MAC address?

- 128
- **48**
- 8
- 132

28. An administrator deploys wireless access points across the office to provide wireless network connectivity to users. Each workstation receives an IP address via DHCP. After a file server with a static IP is connected to the wired network, the administrator receives an IP address conflict message. What is a possible solution?

- **Change the static IP configured on the file server.**
- Restart the DHCP server.
- Change the IP address of the file server with the ipconfig /release and ipconfig /renew commands.
- Connect the file server to the wireless network.

**Explanation:** If an IP address conflict message is displayed, then a single IP address is being used more than once on the same network. To solve this issue, the administrator needs to give a different static IP address to the server on the network.

29. How many bits are used to represent an IPv6 address?

- **128**
- 48

- 32
- 12

30. A group of users is unable to connect to the network. When testing several of the PCs and issuing the command `ipconfig`, the technician notices that all of them have an IP address in the 169.254.x.x range. What is the most likely cause of this problem?

- The gateway address is incorrect.
- **The DHCP server is not operational.**
- The DNS server is not operational.
- The Internet connection is down.

**Explanation:** If the PCs are not able to connect to a DHCP, they will be allocated an IP address within the range 169.254.0.0 – 169.254.255.255.

31. A user can print to a printer that is on the same network, but the traffic of the user cannot reach the Internet. What is a possible cause of the problem?

- The PC has an incorrect IP address.
- The network cable connected to the user PC is faulty.
- The NIC on the PC is faulty.
- **The PC default gateway address is missing or incorrect.**

**Explanation:** The default gateway IP address is used to reach other networks, including the Internet.

32. A workstation has been moved from the first floor to the fifth floor within an organization. The user is now reporting that the workstation cannot connect to the network. A technician suspects that the workstation could not obtain an IP address from a DHCP server. What is a possible cause of the problem?

- **The workstation has been configured with a static IP address.**
- An IP address conflict occurred.
- The DHCP server is misconfigured.
- The default gateway address is misconfigured on the workstation.

**Explanation:** In most cases in an organization, when a computer is moved from one department to another, it needs a new IP address to connect to the network. When a computer is configured with a static IP address, it will not initiate the process of obtaining a new IP address from DHCP servers.

## IT Essentials (Version 8.0) – ITE 8.0 Certification Checkpoint Exam Chapters 5 – 6 Answers

1. An administrator is setting up a framework to support access control on a network device. What type of server is able to control those who are permitted to access a network and track what actions they perform while accessing the network?

- web server
- DHCP
- FTP server
- **authentication server**

2. Which is the compressed format of the IPv6 address 2002:0042:0010:c400:0000:0000:0000:0909?

- 2002:4200::25:1090:0:99
- 2002:42::25:1090:0:99
- 2002:420:c4:1008:25:190::990
- **2002:42:10:c400::909**

3. A network technician is setting up a web server for a small company. The company has obtained a domain name companyX.com from a domain registry service. The web server must provide secure communication through SSL/TLS technology. When the technician enters companyX.com in the web browser, the unsecured part of the website is displayed. What should the technician do to make the web browser display the secure content of the web server?

- Ensure that the domain name is successfully resolved.
- Use http://companyX.com as the URL.
- **Use https://companyX.com as the URL.**
- Use http://companyX.com::443 as the URL.

**Explanation:** A web URL is in the form protocol://domain-name/resource. HTTP is the default protocol used by all web browsers so that if a user does not specify the protocol in the URL, HTTP is used by default. In order to access the secure content serviced through SSL/TLS, a user must specify HTTPS as the protocol in the URL.

4. A user is setting up a home wireless network. Which type of device must the user have in order to establish the wireless network and provide access to the internet for multiple home devices?

- patch panel
- switch
- hub
- **wireless router**

**Explanation:** A wireless router connects multiple wireless devices to the network. It will then aggregate the internet access requests from home devices to the internet.

5. A small company is upgrading its phone system with IP phones. These phones can be used just by plugging into a network port in the offices. Which technology would support the IP phones?

- NFC
- UPnP
- wireless power transfer
- **Power over Ethernet**

**Explanation:** Power over Ethernet (PoE) is implemented through switches. A PoE switch transfers small amounts of DC current over an Ethernet cable,

along with the data, to power PoE devices. Low voltage devices that support PoE, such as IP phones, can be powered through the Ethernet cable.

**6. What type of connector is used to connect an analog modem to a telephone line socket?**

- BNC
- **RJ-11**
- ST
- RJ-45

**Explanation:** For dial-up Internet service, the modem is connected to the telephone line socket via an RJ-11 connector.

**7. The current IP configuration of a small company is done manually and is time-consuming. Because of increased network growth, a technician needs a simpler way for IP configuration of workstations. Which service would simplify the workstation IP configuration task?**

- DIPS
- ICMP
- APIPA
- **DHCP**

**Explanation:** In networks with more than a few hosts, DHCP simplifies the addressing process. A DHCP server automatically assigns host IP addresses.

**8. A technician needs to add a new wireless device to a small WLAN. The WLAN is a mixture of old and newer 802.11b and 802.11g devices. What choice for the new device would provide the most interoperability for present and future growth?**

- **Add a new 802.11n device.**
- Add a new 802.11g device.
- Add a new 802.11a device.
- Add a new 802.11b device.

**Explanation:** 802.11n devices are interoperable with all the other standards, and provide more bandwidth than the other standards. 802.11a is not interoperable with any of the other standards. 802.11b and 802.11g interoperate with each other, but do not provide the bandwidth supplied by 802.11n devices.

**9. A small company connects data acquisition equipment to the serial port of a computer. The equipment user has reported that not all data is being received by the computer. A technician wants to check the serial communication between the equipment and the computer. Which tool can the technician use to troubleshoot the serial communication?**

- tone generator and probe
- multimeter
- cable tester
- **loopback plug**

**Explanation:** A loopback plug is a device that connects to a computer to perform a diagnostic procedure called a loopback test. In a loopback test, a

signal is transmitted through a circuit and then returned to the sending device to test the integrity of the data transmission.

**10. A network technician is setting up a wireless access point in the front office of a small company. The technician needs to disable an option on the access point that would allow devices to dynamically add themselves to the network without configuration. Which technology should the technician disable?**

- MAC filtering
- port forwarding
- NAT
- **UPnP**

**Explanation:** Universal Plug and Play (UPnP) is a protocol that enables devices to dynamically add themselves to a network without the need for user intervention or configuration. Although convenient, UPnP is not secure. The UPnP protocol has no method for authenticating devices. In addition, the UPnP protocol has numerous security vulnerabilities. This protocol should be disabled.

**11. Which is the compressed format of the IPv6 address fe80:0000:0000:0000:0220:0b3f:f0e0:0029?**

- fe80:9ea:0:2200::fe0:290
- **fe80::220:b3f:f0e0:29**
- fe80:9ea0::2020:0:bf:e0:9290
- fe80:9ea0::2020::bf:e0:9290

**12. A technician is setting up a server that requires two connections between the client and the server, one for commands and replies, the other for the actual transfer of files. What type of server will accomplish this task?**

- web server
- proxy server
- print server
- **FTP server**

**13. A computer can access devices on the same network but cannot access devices on other networks. What is the probable cause of this problem?**

- The cable is not connected properly to the NIC.
- **The computer has an invalid default gateway address.**
- The computer has an invalid IP address.
- The computer has an incorrect subnet mask.

**Explanation:** The default gateway is the address of the device a host uses to access the Internet or another network. If the default gateway is missing or incorrect, that host will not be able to communicate outside the local network. Because the host can access other hosts on the local network, the network cable and the other parts of the IP configuration are working.

**14. Which is the compressed format of the IPv6 address 2001:0db8:0000:0000:0ab8:0001:0000:1000?**

- 2001:db8:1::ab8:0:1



- 2001:db8::a0b0:8:1
- 2001:db8:0:1::8:1
- **2001:db8::ab8:1:0:1000**

**15. A network technician is setting up a web server for a small company. The company has obtained a domain name, company-a.com, from a domain registry service. The new web server is accessible through the IP address matching the domain. However, when the technician types company-a.com in the web browser, an error message displays saying that “The connection has timed out”. What is the problem?**

- **The domain name resolution failed.**
- The DHCP server is down.
- The URL needs to be http://company-a.com.
- A web page named home.html is required to be created first.

**Explanation:** A web URL is in the form of protocol://domain-name/resource. The web server IP address can be used in place of domain-name. The resource is the file structure and file name under the web service. If the domain name is used in the URL, the IP address matching to the domain name must be found first through the name resolution process. HTTP is the default protocol by all web browsers so that a user is not required to type it when accessing a website. Also, home.html is not required for a web server to function. Even if the technician does not create any web page during the installation and configuration process, major web servers have a built-in mechanism to display a greeting message if the web server runs normally.

**16. A technician is setting up an environment where popular and frequently accessed web pages are stored locally on the internal network. What type of server will accomplish this task?**

- FTP server
- web server
- **proxy server**
- print server

**17. A company is setting up one new laser printer on every floor. What type of server will store the print jobs in a queue and then spool them to the device when it is ready?**

- FTP server
- proxy server
- web server
- **print server**

**18. A user needs to connect to Cisco.com but does not know the IP address for this website. What type of server will translate the website name into an IP address?**

- web server
- proxy server
- FTP server
- **DNS server**

**19. What physical layer medium is used by DSL to provide high-speed data communications?**

- television cable
- **telephone lines**
- Satellite dish
- 4G wireless radio

**Explanation:** DSL uses existing telephone lines to carry voice and data traffic at the same time. DSL uses a filter to separate the traffic.

**20. Which is the compressed format of the IPv6 address**

**2002:0420:00c4:1008:0025:0190:0000:0990?**

- 200:420:110:c4b::910:0:90
- 2002:42:10:c400::909
- 2002:42::25:1090:0:99
- **2002:420:c4:1008:25:190::990**

**21. A computer is assigned an IP address of 169.254.33.16. What can be said about the computer, based on the assigned address?**

- It can communicate on the local network as well as on the Internet.
- It can communicate with networks inside a particular company with subnets.
- It has a public IP address that has been translated to a private IP address.
- **It cannot communicate outside its own network.**

**Explanation:** If a computer is configured with DHCP but it cannot communicate with the DHCP server in order to obtain an IP address, the Windows OS automatically assigns a link-local IP, in the range of 169.254.0.0 to 169.254.255.255. The computer can only communicate with other computers connected to the same 169.254.0.0/16 network and cannot communicate with computers in another network.

**22. Which is the compressed format of the IPv6 address**

**2001:0db8:0000:0000:0000:a0b0:0008:0001?**

- 2001:db80:0:1::80:1
- **2001:db8::a0b0:8:1**
- 2001:db8::ab8:1:0:1000
- 2001:db8:0:1::8:

**23. What network service controls those who are permitted to access a network, what they can do while they are there, and track what actions they perform while accessing the network?**

- FTP server
- web server
- print server
- **AAA**

**24. Which is the compressed format of the IPv6 address**

**fe80:09ea:0000:2200:0000:0000:0fe0:0290?**

- fe80:9:20::b000:290
- fe80:9ea0::2020:0:bf:e0:9290

- fe80::0220:0b3f:f0e0:0029
- **fe80:9ea:0:2200::fe0:290**

## IT Essentials (Version 8.0) Chapter 7 Exam Answers ITE v8.0

1. Which cellular technology supports speeds up to 20 Gbps?

- **5G**
- Zigbee
- 4G
- Z-Wave

**Explanation:** Cellular technology standards are 1G, 2G, 3G, 4G, LTE, and 5G. 5G technology supports speeds up to 20 Gbps and is more efficient.

2. Which laptop component is commonly found in the laptop lid?

- motherboard
- power connector
- **Wi-Fi antenna**
- SODIMM

**Explanation:** The laptop lid commonly contains the screen, webcam, microphone, and Wi-Fi antenna.

3. A technician is troubleshooting a laptop with an unresponsive touchscreen. What could be the probable cause?

- The DC jack is not grounded or is loose.
- The battery is not seated properly.
- The digitizer is faulty.
- **The screen is dirty.**

4. What is a design consideration for mobile CPUs used in laptops compared with desktop CPUs?

- **They require smaller cooling mechanisms than desktops do.**
- They operate at higher clock speeds than desktops do.
- They consume more power than desktops do.
- They are interchangeable with desktop CPUs.

**Explanation:** Laptop CPUs are designed to generate less heat and therefore require smaller cooling mechanisms than their desktop counterparts.

5. What are two methods typically used on a mobile device to provide internet connectivity? (Choose two.)

- **Wi-Fi**
- **cellular**
- Z-Wave
- GPS
- Zigbee

**Explanation:** Mobile devices commonly use Wi-Fi and cellular to connect to the internet. The cellular connection uses the cellular data network for a fee. The Wi-Fi connection uses an 802.11 wireless network in the area to connect to the internet.

**6. What type of backlight is used in an LED display?**

- **LED**
- LCD
- light-generating pixels
- CCFL

**Explanation:** Light-emitting diode (LED) displays use an LED backlight to illuminate pixels on the screen. In contrast, liquid crystal displays (LCDs) use either an LED or cold cathode fluorescent lamp (CCFL) backlight. Organic LEDs (OLEDs) do not use a backlight.

**7. What are three common input devices found on laptops? (Choose three.)**

- external monitor
- PS/2 keyboard
- **web camera**
- **fingerprint reader**
- **touchpad**
- AC power connector

**Explanation:** Touchpads, fingerprint readers, and web cameras are common devices on modern laptops. An external monitor is an output device. While a PS/2 keyboard is an input device, it is not commonly used with laptops. An AC power connector provides a method to recharge the battery, but provides no data input to the laptop.?

**8. What could be used in conjunction with a laptop in order to read flash media?**

- M.2 card
- SSD
- **card reader**
- SO-DIMM

**Explanation:** A flash card reader (sometimes simply called a card reader) accepts a variety of flash card types and commonly attaches to a USB port.

**9. Which specialized mobile device is commonly used with VR and AR?**

- e-reader
- **headset**
- fitness monitor
- smart watch

**Explanation:** Virtual reality (VR) provides an immersive experience replacing the real world; augmented reality (AR) uses an overlay of digital elements into the real world. Headsets are commonly used with both VR and AR technologies.

**10. Which laptop component would be considered an FRU?**

- battery
- **display**
- SODIMM
- external card reader

**Explanation:** A field-replaceable unit (FRU), such as a motherboard, display, keyboard, or touchpad, commonly requires some technical skill to install. RAM and a battery are considered to be customer-replaceable units (CRUs).

**11. Which protocol can be used to transfer messages from an email server to an email client?**

- SMTP
- SNMP
- **POP3**
- HTTP

**Explanation:** SMTP is used to send mail from the client to the server but POP3 is used to download mail from the server to the client. HTTP and SNMP are protocols that are unrelated to email.

**12. Which ACPI state turns the CPU and RAM off and copies the contents of RAM to a temporary file on the hard disk?**

- S3
- S2
- S1
- **S4**
- S0

**Explanation:** The Advanced Configuration and Power Interface (ACPI) standard provides support for power states that are very important to mobile devices such as laptops.

S0 – The computer is on and CPU running.

S1 – CPU and RAM have power, but unused devices are powered down.

S2 – CPU is off; RAM is refreshed.

S3 – CPU is off; RAM is set to a slow refresh rate.

S4 – CPU and RAM are off (and RAM contents saved to a temp file).

S5 – The computer is off.

**13. To clean laptops, which two products are recommended? (Choose two.)**

- rubbing alcohol
- car wax
- **cotton swabs**
- ammonia
- **mild cleaning solution**

**Explanation:** To clean a laptop computer, mild substances and lint-free cloths are required. Cleaners should be nonabrasive. Otherwise they can damage the laptop components.

**14. What is the purpose of a digitizer in a mobile device?**

- to convert AC to DC
- to convert analog video signals to digital ones

- **to convert user touch actions to digital input signals**
- to convert digital music to analog for headphone delivery

**Explanation:** Digitizers are used in mobile device touchscreens. The digitizer converts user touch actions such as a swipe or tap into an input digital signal.

**15. Which two statements are true of a laptop CPU when compared to a desktop CPU? (Choose two.)**

- Laptop CPUs are interchangeable with desktop CPUs.
- Laptop CPUs operate at higher clock speeds.
- **Laptop CPUs use smaller cooling devices.**
- **Laptop CPUs are designed to produce less heat.**
- Laptop CPUs consume more power.

**Explanation:** Laptop CPUs are designed to use less power and generate less heat than desktop CPUs.

**16. What is a characteristic of laptop motherboards?**

- **Laptop motherboards are proprietary.**
- Laptop motherboard components are compatible with desktop motherboards.
- Laptop motherboards use the same form factors as desktop motherboards.
- Laptop motherboards use standard form factors.

**Explanation:** Laptop motherboards are proprietary and vary based on the manufacturer. Laptop motherboards and desktop motherboards are designed differently and are not compatible. Components that are used on a desktop motherboard generally cannot be used on a laptop motherboard.

**17. A technician is configuring a device and the device shows that it is pairing. Which mobile technology is being used?**

- **Bluetooth**
- Wi-Fi
- tethering
- Zigbee

**Explanation:** In order to configure two Bluetooth devices, the devices must connect to one another by pairing with one another. This may require a PIN or passkey as part of the process.

**18. Which app is used to synchronize data to an iOS-based mobile device?**

- Auto Sync
- **iTunes**
- MIME
- SMTP

**Explanation:** iOS devices can synchronize apps, music, video or books using the iTunes app.

**19. A technician working on a cell phone must provide documentation regarding the phone. Where would the technician find the IMSI information?**

- on the phone information label
- under the battery
- **on the SIM card or programmed on the phone**
- within phone contacts

**Explanation:** The international mobile subscriber identity (IMSI) number is a unique mobile device number that is commonly programmed on the subscriber identity module (SIM) card or can be programmed on the phone by some service providers.

**20. A technician has been asked to decide which laptop components should be cleaned on a monthly basis as part of a maintenance routine. What are two examples of components that should be included? (Choose two.)**

- CPU
- **keyboard**
- optical drive
- **exterior case**
- RAM

**Explanation:** Routine preventive maintenance includes the cleaning of parts that can get dirty with everyday use. Internal components are not required to be cleaned as often as external parts. Nonabrasive cleaners should be used to ensure that no damage is caused to laptop components.

**21. A salesperson wants to embed geographical location metadata onto various media such as photographs and videos. What technology, product, or setting allows this task to be accomplished?**

- NFC
- GPS
- RFID
- **geotagging**

**22. A technician is working on a laptop and an error message about decryption appears when opening an email. What is a probable cause for this situation?**

- **A digital certificate is missing.**
- The Num Lock key is depressed.
- The battery is low.
- The display setting is incorrect.

**23. A doctor wants to make a backup copy of all of the data on a mobile device. What technology allows this task to be accomplished?**

- NFC
- GPS
- **cloud service**
- MIME

**24. Which type of RAM modules are designed for the space limitations of laptops?**

- SRAM
- SIMMs
- DIMMs



- **SODIMMs**

**Explanation:** SRAM is not used for desktops or laptops as a RAM module, but as L1 cache inside the CPU. SIMMs were replaced by DIMMs on desktops as RAM modules.

**25. What device setting is used to share the cellular WAN connection of a phone in order to allow other devices to connect to the Internet?**

- airplane mode
- Wake on LAN
- **mobile hotspot**
- Wi-Fi

**Explanation:** The mobile hotspot setting is used to share an Internet connection on a mobile phone with other devices.

**26. Where is an integrated microphone normally located on a laptop?**

- **in the top of the display**
- near the exterior on either side of the keyboard by the plastic frame
- by the exterior ports
- under the keyboard near the pointing device or touchpad

**Explanation:** A laptop webcam, microphone, and wireless antenna are commonly located in the top of the display.

**27. Which characteristic should be considered when a replacement mobile device battery is being selected?**

- It is from the same manufacturer.
- It provides a warranty.
- It is a mini-ATX form factor.
- **It has the same power ratings.**

**Explanation:** A replacement battery must meet or exceed the specifications of the mobile device manufacturer and have the same form factor.

**28. An entrepreneur is opening a computer store in a small town and wants to display a few laptops in the store, but is concerned about security. What physical laptop feature might assist in addressing this issue?**

- LoJack
- **security slot**
- IR
- GPS

**29. A technician has been called on site to help a user who has a laptop problem. At which point should the technician look online for additional possible solutions to a laptop problem?**

- after questioning the user
- **after testing a theory to determine the cause**
- before establishing a theory of probable cause
- after implementing preventive measures

**Explanation:** The steps of the troubleshooting process are as follows:  
Identify the problem.  
Establish a theory of probable cause.

Test the theory to determine the cause.

Establish a plan of action to resolve the problem and implement the solution. Verify full system functionality and, if applicable, implement preventive measures.

Document findings, actions, and outcomes.

It is during step 4 that if no solution is achieved in the previous step that a technicians needs further research.

**30. A manager wants to have a laptop with touchscreen capabilities. What technology allows this task to be accomplished?**

- MIME
- GPS
- mobile hotspot
- **digitizer**

**31. An executive wants to enable a cell phone to be used as a hands-free device. What technology, product, or setting allows this task to be accomplished?**

- digitizer
- **Bluetooth**
- geotagging
- firewall

**32. A student wants to make a backup copy of all of the data on a personal mobile device. What technology, product, or setting allows this task to be accomplished?**

- digitizer
- geotagging
- **cloud service**
- VPN

**33. A technician is working on a laptop and the GPS is not functioning. What is a probable cause for this situation?**

- Bluetooth is activated.
- **A service is disabled.**
- The display setting is incorrect.
- The battery is low.

**Case 2:**

- The battery is low.
- Wi-Fi is turned off.
- The display setting is incorrect.
- **Airplane mode is turned on.**

**34. An employee wants to include pictures and documents when sending email messages on a mobile device. What technology allows this task to be accomplished?**

- airplane mode
- cloud service
- **MIME**
- Bluetooth

35. A lawyer wants to enable a smartphone to be used as a hands-free device. What technology allows this task to be accomplished?

- NFC
- GPS
- MIME
- **Bluetooth**

36. An employee wants to pay for a product just by tapping a smartphone on a sensor. What technology, product, or setting allows this task to be accomplished?

- GPS
- MIME
- **NFC**
- IDS

**Explanation:** Near field communication (NFC) allows short range communications between devices such as mobile phones and payment terminals. It is similar to RFID but has an extremely limited range useful for transferring sensitive information.

37. A student wants to make a backup copy of all of the data on a mobile device. What technology allows this task to be accomplished?

- NFC
- **cloud service**
- GPS
- MIME

38. A salesperson wants to embed the location on a digital photograph to record where it was taken. What technology allows this task to be accomplished?

- MIME
- GPS
- mobile hotspot
- **geotagging**

39. An employee wants to find an alternate route home because the usual route is blocked by an accident. What technology, product, or setting allows this task to be accomplished?

- digitizer
- geotagging
- **GPS**
- IDS

40. A lawyer wants to give a laptop the ability to access the internet through a cellular network. What technology, product, or setting allows this task to be accomplished?

- digitizer
- geotagging
- RAID
- **mobile hotspot**

41. A manager wants to purchase a specialized mobile device for a new VR game. What technology, product, or setting allows this task to be accomplished?

- geotagging
- Wi-Fi calling
- **headset**
- IPS

42. A lawyer wants to give a laptop the ability to connect to the internet through the cellular network. What technology allows this task to be accomplished?

- airplane mode
- cloud service
- Bluetooth
- **mobile hotspot**

43. A student wants to make mobile phone calls over a wireless data network based on 802.11 technology. What technology allows this task to be accomplished?

- NFC
- GPS
- **Wi-Fi calling**
- MIME

44. A customer brings a laptop into a computer repair shop. The technician can tell that the laptop is powered on by the power light, but nothing displays on the screen. What are two possible issues that could cause this symptom? (Choose two.)

- The backlight needs adjusting.
- **The laptop has gone into sleep mode.**
- The display properties need adjusting.
- **The screen cutoff switch needs cleaning or is damaged.**
- The video cable is loose.

**Explanation:** A dark screen on a laptop when the display is up and the laptop is powered on could happen because the laptop is in sleep mode. Tap a key to see if that is the case. If that does not work, remove the battery and AC power cord, then reinstall the battery and attach the power cord and try powering on again. The problem could also be a dirty or damaged screen cutoff switch. Use the repair manual to locate and clean or replace the switch.

45. An analyst wants to communicate with the company while exercising and be able to track personal physical activity. What technology, product, or setting allows this task to be accomplished?

- 
- geotagging
- Wi-Fi calling
- **smartwatch**
- QoS

**46. A student wants to make a backup copy of all of the data on a personal mobile device. What technology, product, or setting allows this task to be accomplished?**

- NFC
- GPS
- virtualization
- **cloud service**

**47. Which step would be important in the removal of laptop memory?**

- Align the memory module notch at a 45-degree angle and press to release.
- **Press outward on the clips that hold the memory module.**
- Attach an AC adapter before starting the procedure.
- Gently press down on the memory module until it releases from the slot.

**Explanation:** Memory modules have a clip on either end that holds the SODIMM securely in the slot. Press outward on both clips to release the memory module from the slot.

**48. A technician is working on a laptop and an app is not loading. What is a probable cause for this situation?**

- More than one app is open simultaneously
- The battery is low
- **An app needs to be restarted**
- The display setting is incorrect

**49. A doctor wants to use a cell phone for entertainment without connecting to any networks. What technology allows this task to be accomplished?**

- NFC
- GPS
- **airplane mode**
- MIME

**50. A technician is working on a laptop and an error message about decryption appears when opening an email. What is a probable cause for this situation?**

- The battery is low.
- The Num Lock key is depressed.
- The screen resolution needs recalibration.
- **The security certificate is not recognized.**

**51. A salesperson wants to make mobile phone calls over a wireless data network based on 802.11 technology. What technology allows this task to be accomplished?**

- MIME
- GPS
- **Wi-Fi calling**
- mobile hotspot

**52. A technician is working on a laptop and an app is not responding. What is a probable cause for this situation?**

- **An app needs to be restarted.**
- The battery is low.
- The Num Lock key is depressed.
- The display setting is incorrect.

**53. Which laptop component makes use of throttling to reduce power consumption and heat?**

- hard drive
- motherboard
- optical drive
- **CPU**

**Explanation:** To reduce heat and power consumption, CPU throttling can be used. CPU throttling reduces the CPU speed.

**54. Which statement is true of laptop motherboards?**

- They are interchangeable with most desktop motherboards.
- **The form factor varies by manufacturer.**
- They follow standard form factors so they can be interchanged easily.
- Most of them use the ATX form factor.

**Explanation:** Laptop computers use proprietary form factors and therefore they are different from one manufacturer to another.

## IT Essentials (Version 8.0) Chapter 8 Exam Answers ITE v8.0

**1. Employees of a small business are complaining that the printer is printing faded images. What should the technician do to resolve the issue?**

- Reset the page counter.
- Check the vibration of the crystals.
- **Replace the toner cartridge.**
- Update the BIOS.
- Clean the printer.

**2. A technician is complaining about the following printer issue: The print appears faded on the paper. What are two possible causes of this issue? (Choose two.)**

- The printer is using the wrong cable.
- The room temperature is above normal.
- A test page was never printed.
- **The toner cartridge is low.**
- **The paper might be incompatible with the printer.**

**3. What type of connection would be used to connect a printer directly to the network?**

- **Ethernet**
- USB
- Firewire
- serial

**Explanation:** To connect a printer directly to the network an Ethernet connection through an RJ-45 interface would be used.

**4. A technician is installing a printer that will be directly connected to a computer. Why does the technician not connect the printer initially during the installation process?**

- The printer needs to be configured first.
- The OS of the workstation needs to be updated first.
- The Microsoft download site needs to be searched first for the printer driver.
- **The printer driver might need to be installed first before the printer is connected.**

**Explanation:** When installing a new printer that is attached directly to a workstation, a technician should read the installation instructions carefully. For some printers, the printer driver should be installed on the computer before the printer is connected.

**5. What is a characteristic of thermal inkjet nozzles?**

- The vibration of the crystal controls the flow of ink.
- **The heat creates a bubble of steam in the chamber.**
- Heat is applied to the ink reservoir of each nozzle.
- A charge is applied to the printhead.

**Explanation:** Thermal inkjet nozzles work based on heat creating steam bubbles. Piezoelectric inkjet nozzles work based on vibration of crystals.

**6. Which document function can a networked MFD provide that is unavailable on a standalone document copier or printer?**

- scan to local memory
- scan to paper
- scan to multiple paper copies
- **scan to email**

**Explanation:** In addition to the functions of a standalone document copier or printer, a networked MFD can scan a document to email, a network folder on the LAN, and a cloud storage location.

**7. What is the purpose of the Additional Drivers button in the Sharing tab of the Printer Properties?**

- to add additional drivers for other printers connected to the computer
- to add additional drivers for duplex printing
- to add additional drivers for other printers in the network
- **to add additional drivers for other operating systems**

**Explanation:** The Additional Drivers button loads drivers in the sharing computer for other operating systems that the client computers may be



running. For other printers in the network, the drivers must be loaded in the computers sharing the other printers. There is no need for additional drivers for duplex printing. The required drivers for other printers connected to the sharing computer will be loaded automatically.

**8. Which factor affects the speed of an inkjet printer?**

- the cost of the inkjet cartridges
- the quality of the paper
- the size of printer power supply
- **the desired quality of the image**

**Explanation:** The speed of an inkjet printer is determined mostly by the make and model of the printer, the quality of printing, and the complexity of the image. The quality of the paper, the cost of the cartridges, and the size of the power supply do not affect the speed of printing.

**9. In laser printing, what is the name of the process of applying toner to the latent image on the drum?**

- charging
- fusing
- **developing**
- transferring

**Explanation:** The toner is applied to the latent image on the drum during developing. The toner attached to the latent image is transferred to the paper during transferring. The toner transferred is melted to the paper during fusing, and the drum gets a uniform negative charge during charging.

**10. How can the life of a thermal printer be extended?**

- Wipe the outside of the printer with a damp cloth.
- Clean the inside of the printer with a vacuum cleaner with a HEPA filter.
- **Clean the heating element regularly with isopropyl alcohol.**
- Keep the paper dry in a low humidity environment.

**Explanation:** The life of a thermal printer can be extended by cleaning the heating element regularly with isopropyl alcohol. A thermal printer does not use toner, so cleaning with a vacuum cleaner with a HEPA filter is not necessary. The condition of the paper and the cleanliness of the outside of the printer would probably do little to extend the life of the printer.

**11. What are two methods to connect to a printer wirelessly? (Choose two.)**

- WiMax
- satellite
- **IEEE 802.11 standards**
- **Bluetooth**
- microwave

**Explanation:** Wireless printers can use Bluetooth, 802.11x, or infrared interfaces to connect wirelessly. WiMax, satellite, and microwave radio technologies are in practice never used to connect a printer to a network.

**12. What are two cables that are used to connect a computer to a printer?  
(Choose two.)**

- PS/2
- **serial**
- **FireWire**
- eSATA
- HDMI

**Explanation:** Wiring a PC to a printer can be done through the following connections: serial, parallel (IEEE 1284 and SCSI), USB, Firewire (IEEE 1394) and Ethernet. PS/2, HDMI, and eSATA connections are used for other purposes.

**13. A user tells a technician that the printer does not respond to attempts to print a document. The technician attempts to print a document and the printer does not output any pages. The technician notices that the printer LCD display is blank and unlit. What is most likely the problem?**

- The printer is out of ink.
- The screen contrast is too low.
- The print head is clogged.
- **The printer is not turned on.**

**Explanation:** If the printer display is displaying nothing and the printer is not attempting to print a document, most likely the printer is turned off.

**14. A user discovers that an inkjet color printer is printing different colors from those that are shown on the screen. What can be done to solve this problem?**

- Replace the fuser.
- Adjust the printer spool.
- **Calibrate the printer.**
- Replace the drum.

**Explanation:** Calibrating the printer will align the heads and help in dosing the ink. The print spool problems are more related to queues. Color inkjet printers do not use drums or fusers.

**15. Which device can scan a document and attach the scan to an email?**

- laser printer
- thermal printer
- **networked MFD**
- automatic document feeder

**Explanation:** A networked MFD can scan a document and attach the scan to an email. Thermal printers, laser printers, and automatic document feeders can not attach scanned documents to emails.

**16. What corrective action would a technician take in response to a print spooler error?**

- clean the printer
- reboot the printer
- **restart the print spooler**

- update the printer driver

**Explanation:** Print spooler errors can occur when the printer service is stopped or not working properly. The first corrective action is to restart the print spooler. In some cases, it may be necessary to reboot the computer.

**17. What mechanism is used in a laser printer to permanently fuse the toner to the paper?**

- **heat**
- electrical charge
- pressure
- light

**Explanation:** Heat is used during the fusing process in a laser printer to permanently fuse the toner to the paper.

**18. The users on a LAN are reporting that computers respond slowly whenever high resolution photographs are being printed on the color laser printer. What would be the cause of this problem?**

- The printer is not configured for duplex printing.
- **The printer does not have enough memory to buffer an entire photograph.**
- The printer is not configured for the proper paper orientation.
- The paper is not adequate for photograph printing.

**Explanation:** Printer memory affects print speed and efficiency. Laser printers use memory to buffer print jobs, capturing them in printer memory while allowing computers to proceed with other work while printing.

**19. Match the common printer configuration options to the correct descriptions. (Not all options are used.)**

print layout	print sets of a document with multiple pages
grayscale printing	collate
paper orientation	landscape or portrait
duplex	paper orientation
collate	draft, normal, or photo
	images printed using only black ink in different shades
	grayscale printing
	normal, banner, booklet, or poster
	print layout
	two-sided printing
	duplex

**20. A technician is programming a wireless printer to connect to the wireless network and communicate wirelessly with nearby devices. Which two wireless modes are used for wireless printer connectivity? (Choose two.)**

- IR
- cloud-based
- **infrastructure**
- **ad hoc**
- hands-free

**Explanation:** A wireless printer can operate in infrastructure mode and connect to an 802.11 Wi-Fi wireless network. A wireless printer might also support ad hoc mode which allows devices to communicate directly with the wireless printer.

**21. After applying a solution to a printer problem, a technician restarts the printer and prints a test page. Which step of the troubleshooting process is the technician applying?**

- **verifying the solution and system functionality**
- identifying the problem
- testing a theory to determine the cause of the problem
- documenting findings, actions, and outcomes

**Explanation:** Testing a printer by restarting it and printing a test page are actions taken within the verification of the solution and system functionality step.

**22. Which statement describes a printer driver?**

- **It is software that converts a document into the format that a printer can understand.**
- It is cache inside a printer that stores documents to be printed in a queue.
- It is the interface in Windows that identifies a unique printer attached to the workstation.
- It is the configuration code that is sent to a printer to identify the operating system of the workstation.

**Explanation:** Printer drivers are software programs that convert various media types in a document to a stream of commands in a language that the printer can understand. During a printer installation, Windows links an interface called “printer” with a specific driver that is compatible with the actual printer hardware.

**23. What are two functions of a print server? (Choose two.)**

- **provide print resources to all connected client computers**
- ensure that the connected client computers have up-to-date printer drivers
- store backups of documents sent to the printer
- **store print jobs in a queue until the printer is ready**
- provide uninterrupted power to the printer

**Explanation:** A print server can provide client computers access to print resources, manage print jobs by storing them in a queue until the print device is ready for them, and provide print job status messages to users.

**24. A Windows 7 computer has several printers configured in the Control Panel Devices and Printers window. Which printer will the computer choose to be the first option for printing?**

- the software-based printer that is used to create PDF files
- the software-based printer that is used to create XPS files
- **the printer that is set as the default printer**

- a manual selection, which is always needed

**Explanation:** The Default Printer option is set globally and it will be the first printer to be chosen to print a job, unless Other Printer is selected in a Per-Document manner. Software-based printers are just instances of different kinds of printers, but for them to be chosen to do the job, they will need to be selected either as a default or per-document printer. There is no need to select a printer every time a printing job is sent.

**25. What is a characteristic of global and per-document options in print settings?**

- Global options take precedence over per-document options.
- It is not possible to configure per-document options.
- **Per-document options override global options.**
- It is not possible to configure global options.

**Explanation:** Global settings act as default settings, whereas per-document settings are helpful with specialized documents, like letters and spreadsheets.

**26. Which action supports an effective printer preventive maintenance program?**

- Replace laser printer toner at set predetermined time intervals.
- Clean inkjet print heads when they stop working.
- Disconnect the printer from the power source when it is not in use.
- **Reset the printer page counters if available.**

**Explanation:** Resetting the page counters will assist in documenting printer usage and planning future maintenance. Cleaning parts only when they are no longer working, replacing consumables at set time intervals regardless of need, and disconnecting the printer from the power when it is not in use are not related to a preventive maintenance program.

**27. A manager is complaining that the toner is coming off the pages printed by the laser printer. What should the technician do to resolve the issue?**

- Reset the page counter.
- Clean the printer.
- Check the vibration of the crystals.
- Update the OS.
- **Replace the fuser.**

**28. In Windows 8, what must be configured to enable one user to share a USB-connected printer with another user on the same network?**

- **File and printer sharing**
- Windows firewall
- Windows Defender
- IEEE 802.11
- virtualization option in BIOS

**Explanation:** In both Windows 7 and 8, use the Network and Sharing Center control panel > Change advanced sharing settings to select the Turn on file and printer sharing option.

29. A librarian is complaining about the following printer issue: The printer control panel displays no image. What are two possible causes of this issue? (Choose two.)

- **The printer is not turned on.**
- The room temperature is above normal.
- The printer does not have enough RAM.
- The printer is using the wrong cable.
- **The contrast of the screen may be set too low.**

30. What corrective action should be taken if a printer is printing faded images?

- secure loose printer cables
- update the print driver
- clean the printer
- **replace the toner cartridge**

**Explanation:** If a printer is printing faded images, it is an indication that either the toner is low or the toner cartridge is defective.

31. What would cause an inkjet printer to fail to print any pages?

- The printer software is set to toner save.
- **The ink cartridge is empty.**
- The printer ribbon is worn out.
- The printer is loaded with a paper type other than photo paper.

**Explanation:** An inkjet printer will commonly fail to print when the inkjet cartridge is empty.

32. A technician is complaining about the following printer issue: The toner is not fusing to the paper. What are two possible causes of this issue? (Choose two.)

- **The toner cartridge is defective.**
- **The paper might be incompatible with the printer.**
- A test page was never printed.
- The laser printer is emitting too much radiation.
- The printer lid has not been closed securely.

33. What are two probable causes for printer paper jams? (Choose two.)

- **the wrong type of paper**
- a defective print cartridge
- misaligned print heads
- an incorrect print driver
- **high humidity**

**Explanation:** Humidity can cause sheets of paper to stick together which could cause paper jams. Using the wrong type of paper for a printer might also create a jamming issue.

34. A teacher is complaining about the following printer issue: The paper is creased after printing. What are two possible causes of this issue? (Choose two.)



- **The paper-feed tray might not be firmly adjusted against the edges of the printer.**
- Print jobs are being sent to the wrong printer.
- The room temperature is above normal.
- **The paper might be loaded incorrectly.**
- The printer is using the wrong cable.

**35. A reporter is complaining about the following printer issue: The paper jams when the printer is printing. What are two possible causes of this issue? (Choose two.)**

- **The humidity could be high and that causes the paper to stick together.**
- The laser printer is emitting too much radiation.
- The wrong printer type has been selected.
- **The printer could be dirty.**
- The printer lid has not been closed securely.

**36. All documents printed by the laser printer in the branch office have ghost or shadow images appearing on the paper. What should the technician do to resolve the issue?**

- Configure the printer for duplex printing.
- Update the OS.
- Update the BIOS.
- **Replace the drum.**
- Check the vibration of the crystals.

**37. A librarian is complaining about the following printer issue: My impact printer produces faded or light characters. What are two possible causes of this issue? (Choose two.)**

- **The ribbon may be worn out.**
- The printer does not have enough RAM.
- **The ribbon may be damaged.**
- The wrong printer type has been selected.
- The laser printer is emitting too much radiation.

**38. A user notices that the data transfer rate for the gigabit NIC in the user computer is much slower than expected. What is a possible cause for the problem?**

- **the switch connection speed was set to 10/100 Mb/s.**
- Hibernation mode is causing the NIC to shutdown unexpectedly
- The NIC is configured to use both IPv4 and IPv6 at the same time
- The NIC wake-on-LAN setting is misconfigured

**39. A receptionist is complaining about the following printer issue: The print queue seems to be functioning properly, but the printer does not print. What are two possible causes of this issue? (Choose two.)**

- **There is a bad cable connection.**
- The print queue is overloaded.
- The wrong printer type has been selected.
- The laser printer is emitting too much radiation.

- **The printer has an error such as out of paper, out of toner, or paper jam.**

40. A reporter is trying to print several high resolution photographs but the color laser printer is going extremely slowly. What should the technician do to resolve the issue?

- Rewind the ribbon.
- Install a USB hub.
- Connect the printer using wireless.
- **Add more RAM to the printer.**
- Update the BIOS.

41. A photographer is complaining about the following printer issue: The printer issues a “Document failed to print” message. What are two possible causes of this issue? (Choose two.)

- **The printer is no longer shared.**
- The paper tray is flimsy.
- The wrong printer type has been selected.
- The laser printer is emitting too much radiation.
- **A cable is loose or disconnected.**

42. A teacher is complaining about the following printer issue: The paper is creased after printing. What are two possible causes of this issue? (Choose two.)

- The printer has been installed on the wrong port.
- The wrong printer type has been selected.
- **The paper-feed tray might not be firmly adjusted against the edges of the printer.**
- **The paper might be loaded incorrectly.**
- The laser printer is emitting too much radiation.

43. Which type of print server provides the most functions and capabilities?

- **a dedicated PC print server**
- a computer-shared print server
- a hardware print server
- a print server that is implemented in software

**Explanation:** A dedicated PC print server has its own resources for the job and can manage several printers. A computer-shared print server uses its resources for sharing as well as for its own PC tasks. A hardware print server can only manage one printer, and a software print server cannot exist without hardware to run it.

44. An office assistant in a law firm is trying to print many large legal documents but is getting “memory overload” error messages from the printer. What should the technician do to resolve the issue?

- **Add more memory to the printer.**
- Replace the pickup roller.
- Check the vibration of the crystals.
- Install a USB hub.
- Connect the printer using wireless.

45. A technician recorded that a new fuser roller unit was installed in a laser printer to solve a printing problem. Which step in the troubleshooting process did the technician just perform?

- **documenting findings, actions, and outcomes**
- verifying the solution and system functionality
- identifying the problem
- testing a theory to determine the cause of the problem

**Explanation:** Recording the components and parts used to fix a printer problem is part of the documenting findings, actions, and outcomes step.

46. A new printer has just been installed deep in a mine. When test pages are printed, the paper constantly jams. What should the technician do to resolve the issue?

- Rewind the ribbon.
- Install a USB hub.
- **Move the printer to a less-humid location.**
- Connect the printer using wireless.
- Update the BIOS.

47. A user complains that recently every printed document has vertical lines and streaks on the paper. What should the technician do to resolve the issue?

- **Distribute the toner more evenly within the cartridge.**
- Clean the printer.
- Install a USB hub.
- Connect the printer using wireless.
- Update the BIOS.

48. A user is complaining that the printer is printing pages with no image on them. What should the technician do to resolve the issue?

- Reset the page counter
- Check the vibration of the Crystal's
- Update the OS
- **Replace the toner cartridge**
- Clean the printer

49. A school is installing a new shared printer but the printer is not showing up on the list of available printers. What should the technician do to resolve the issue?

- Reset the page counter.
- Install a USB hub.
- **Manually add the printer IP address.**
- Connect the printer using wireless.
- Update the BIOS.

50. A school is installing a new shared printer but the printer is not showing up on the list of available printers. What should the technician do to resolve the issue?

- **Manually add the printer IP address.**
- Reset the page counter.

- Rewind the ribbon.
- Clean the printer.
- Check the vibration of the crystals.

**51. Employees are complaining that they send print jobs to a newly installed printer but the print jobs never print. What should the technician do to resolve the issue?**

- **The printer is connected to the wrong port. Modify the port.**
- Check the vibration of the crystals.
- Rewind the ribbon.
- Clean the printer.
- Reset the page counter.

**52. A manager is complaining about the following printer issue: The ink printer is printing blank pages. What are two possible causes of this issue? (Choose two.)**

- **The print head is clogged.**
- **The printer is out of ink or toner.**
- The printer is using the wrong cable.
- The wrong printer type has been selected.
- The laser printer is emitting too much radiation.

**53. A small company is moving towards sharing printers to reduce the number of printers used within the company. The technician has security concerns. What security risk is associated with sharing a printer?**

- **data privacy**
- dumpster diving
- shoulder surfing
- replay attacks

**Explanation:** Three security concerns related to shared printers include (1) cached print files could contain sensitive data; (2) user authentication is needed to control access to the printer; and (3) print jobs could be read by others, intercepted, copied, or modified. Dumpster diving and shoulder surfing are security concerns whether the printer is shared or not. A replay attack is where a packet is captured, altered, and sent back to the original destination. Print jobs are not commonly returned to the sender.

**54. A reporter is trying to print several high resolution photographs but the color laser printer is going extremely slowly. What should the technician do to resolve the issue?**

- Replace the pickup roller.
- Check the vibration of the crystals.
- **Add more RAM to the printer.**
- Install a USB hub.
- Connect the printer using wireless.

**55. Users have noticed that the colors on their printed documents are different from the colors that they see on their computer screens. What should the technician do to resolve the issue?**

- Install a USB hub

- Configure the printer for duplex printing
- Power cycle the printer
- Update the OS
- **Calibrate the printer**

56. A technician has just completed a preventive maintenance on the department printer. Users are now complaining that the printer is no longer available. What should the technician do to resolve the issue?

- **Check that the printer is plugged into a power source.**
- Connect the printer using wireless.
- Configure the printer for duplex printing.
- Power cycle the printer.
- Update the OS.

## IT Essentials (Version 8.0) – ITE 8.0 Certification Checkpoint Exam Chapters 7 – 8 Answers

1. A user got a Bluetooth headset as a gift but cannot make it work with a smartphone. The user visits the service desk for help. What are two things that the technician should show the user? (Choose two.)

- **how to pair the headset**
- how to set the proper battery usage configuration
- how to join a wireless network correctly
- **how to turn on Bluetooth**
- how to turn on location services

**Explanation:** When a mobile device cannot connect to a Bluetooth device, a user should check to verify that Bluetooth is turned on, that the Bluetooth device is paired with the mobile device, and that the mobile device is within range.

2. A large department store is deploying a new method of payment that allows a shopper to make a payment by placing a smartphone on a sensing device. Which service must be enabled on smartphones to support this technology?

- IR
- Wi-Fi
- **NFC**
- Bluetooth

**Explanation:** Near Field Communication (NFC) enables mobile devices to establish radio communications with other devices by placing the devices close together or by touching them together.

3. A technician wants to allow many computers to print to the same printer, but does not want to affect the performance of the computers. What will the technician do to achieve this?

- **Use a hardware print server.**
- Use a computer-shared printer.
- Install a second printer.
- Use a software print server.

**Explanation:** A hardware print server allows many users to print to the same printer without using the resources of any computer. A computer-shared printer uses a computer to manage all of the print jobs. There is no software print server. Installing a second printer would reduce the print jobs on any one computer, but would still use computer resources.

**4. A user has a locally attached printer and is sharing it with coworkers in an office. A coworker is trying to print a long document and a print spooler error message appears. What should the user do to try to solve the problem?**

- Test the printer by having the coworker send a small file to the printer.
- Reinstall the printer driver.
- **Reboot the computer.**
- Reconfigure the printer port.

**Explanation:** The print spooler error message indicates that the printer service has stopped or is not working properly. The user can either try to start the print spooler or reboot the computer, which will restart the printer service.

**5. A local service shop needs to replace one of its printers. The current printer is used to print invoices on 3-part carbonless forms with continuous feed. Which type of printer would meet the requirement?**

- thermal
- inkjet
- laser
- **dot matrix**

**Explanation:** A dot matrix printer is a type of impact printer. Impact printers have print heads that strike an inked ribbon, causing characters to be imprinted on the paper. The striking force will make characters imprint on multiple sheets of paper.

**6. A user in a law firm has a locally attached laser printer. The user wants to make it available to other office workers. What are two disadvantages of sharing a locally attached printer? (Choose two.)**

- All other office workstations must use the same printer driver.
- **The computer may perform slowly at times.**
- Documents sent to the printer will leave a copy on the computer.
- An Ethernet NIC must be installed on the printer.
- **The printer is not available if the computer is rebooted or shutdown.**

**Explanation:** The computer sharing the printer uses its own resources to manage the print jobs coming to the printer. If the computer user on the desktop is working at the same time as a user on the network is printing, the

desktop computer user might notice a performance slowdown. In addition, the printer is not available to others if the user reboots or powers off the computer connected to the shared printer.

**7. A user cannot open several apps on a cell phone and takes the device into a repair shop. What is one possible cause for this situation?**

- The apps are in an area of memory storage that is corrupt and can no longer be used.
- The apps do not have the required root-level permission to operate.
- The apps that do open are using too many resources.
- **The apps were installed on a memory card and the card has been removed.**

**Explanation:** When several apps will not open, the apps might have been moved between storage options or installed to a flash memory card that has been removed. Reinstall the apps or reinsert the memory card.

**8. A user is installing a local laser printer and prints a test page after installation. However, the printer prints unknown characters. What is the most likely cause of the problem?**

- **An incorrect printer driver is installed.**
- The toner cartridge is low.
- The toner cartridge is defective.
- The cable connection is loose.

**Explanation:** The problem is caused by a wrong or outdated print driver installed in the computer. A print driver is a piece of software on a computer that converts the data to be printed to a format that a printer can understand.

**9. A reporter is complaining about the following printer issue: The printer is printing unknown characters. What are two possible causes of this issue? (Choose two.)**

- **The printer has a loose connection.**
- The printer does not have enough RAM.
- The printer lid has not been closed securely.
- **The wrong or an outdated printer driver is installed.**
- The print queue is overloaded.

**Explanation:** [Advanced Problems and Solutions for Printers](#)

**10. A technician wants to connect to a cellular network that supports speeds up to 20 Gbps. What technology, product, or setting allows this task to be accomplished?**

- headset
- QoS
- digitizer
- **5G**

**11. A manager is complaining about the following printer issue: The ink printer is printing blank pages. What are two possible causes of this issue? (Choose two.)**

- **The print head is clogged.**



- The printer is using the wrong cable.
- The print queue is overloaded.
- **The printer is out of ink or toner.**
- The printer lid has not been closed securely.

**12. A user visits the service desk and complains of a swollen smartphone battery. What are three possible causes for the problem? (Choose three.)**

- **The battery has been overcharged.**
- The battery is not holding a charge.
- The battery has passed its usage period.
- **An incompatible charger has been used.**
- The smartphone settings are incorrectly configured.
- **The battery is defective.**

**Explanation:** A swollen smartphone battery could have several causes, including being overcharged, being charged with an incompatible charger, or the battery itself could be defective.

**13. A lawyer wants to include pictures and documents when sending email messages on a mobile device. What technology, product, or setting allows this task to be accomplished?**

- NFC
- GPS
- **MIME**
- RAID

**14. A user is installing a local laser printer and receives an “Access Denied” message. What is the problem?**

- **The user account does not have administrative privileges.**
- The printer is powered off.
- The printer cable connection is loose.
- The printer is installed on the wrong port.

**Explanation:** The problem is that the user account does not have administrative privileges on the computer.

**15. A receptionist is complaining about the following printer issue: My impact printer produces faded or light characters. What are two possible causes of this issue? (Choose two.)**

- **The ribbon may be damaged.**
- The print queue is overloaded.
- A test page was never printed.
- **The ribbon may be worn out.**
- The wrong printer type has been selected.

**16. A teacher is complaining about the following printer issue: The toner is not fusing to the paper. What are two possible causes of this issue? (Choose two.)**

- **The toner cartridge is defective.**
- Print jobs are being sent to the wrong printer.
- The printer does not have enough RAM.
- The print queue is overloaded.

- **The paper might be incompatible with the printer.**

17. A photographer is complaining about the following printer issue: The paper is not being fed into the printer. What are two possible causes of this issue? (Choose two.)

- **The paper may be wrinkled.**
- The paper tray is flimsy.
- A test page was never printed.
- **The printer could be set to print to a different paper size than is currently loaded.**
- The wrong printer type has been selected.

18. A manager is complaining about the following printer issue: The printer is printing incorrect colors. What are two possible causes of this issue? (Choose two.)

- **An incorrect cartridge could be installed.**
- The printer service is stopped or not working properly.
- The print queue is overloaded.
- The printer lid has not been closed securely.
- **The print heads might need to be cleaned and calibrated.**

19. A lawyer wants to include pictures and documents when sending email messages on a mobile device. What technology, product, or setting allows this task to be accomplished?

- 5G
- headset
- **MIME**
- IDS

20. A librarian is complaining about the following printer issue: The printer control panel displays no image. What are two possible causes of this issue? (Choose two.)

- **The contrast of the screen may be set too low.**
- The room temperature is above normal.
- The print queue is overloaded.
- The printer lid has not been closed securely.
- **The printer is not turned on.**

21. A doctor wants to enable a cell phone to be used as a hands-free device. What technology, product, or setting allows this task to be accomplished?

- MIME
- **Bluetooth**
- mobile hotspot
- firewall

22. A technician is complaining about the following printer issue: The toner is not fusing to the paper. What are two possible causes of this issue? (Choose two.)

- **The paper might be incompatible with the printer.**
- A test page was never printed.
- The printer lid has not been closed securely.
- **The toner cartridge is defective.**

- The print queue is overloaded.

**23. A doctor wants to enable a cell phone to be used as a hands-free device. What technology, product, or setting allows this task to be accomplished?**

- NFC
- GPS
- **Bluetooth**
- firewall

**24. An executive wants to make a backup copy of all of the data on a personal mobile device. What technology, product, or setting allows this task to be accomplished?**

- 5G
- headset
- **cloud service**
- virtualization

**25. A salesperson wants to make mobile phone calls over a wireless data network. What technology, product, or setting allows this task to be accomplished?**

- 5G
- headset
- VPN
- **Wi-Fi calling**

**26. A manager wants to purchase a specialized mobile device for a new VR game. What technology, product, or setting allows this task to be accomplished?**

- NFC
- GPS
- IPS
- **headset**

**27. A manager wants to have a laptop with touchscreen capabilities. What technology, product, or setting allows this task to be accomplished?**

- 5G
- **digitizer**
- headset
- IPS

**28. A user is looking for a laptop with touchscreen capabilities. Which technology makes the display of a laptop a touchscreen?**

- LED
- OLED
- **digitizer**
- inverter

**Explanation:** A digitizer is a special glass piece attached to the front of the screen on a laptop. The digitizer converts the touch actions (press, swipe, etc.) into a digital signal that is processed by the laptop so that the displayed content will change accordingly.

29. A technician is complaining about the following printer issue: The print appears faded on the paper. What are two possible causes of this issue? (Choose two.)

- **The toner cartridge is low.**
- The wrong printer type has been selected.
- The printer does not have enough RAM.
- **The paper might be incompatible with the printer.**
- The print queue is overloaded.

30. An employee wants to pay for a product just by tapping a smartphone on a sensor. What technology, product, or setting allows this task to be accomplished?

- **NFC**
- 5G
- headset
- LoJack

**Explanation:** Near field communication (NFC) allows short range communications between devices such as mobile phones and payment terminals. It is similar to RFID but has an extremely limited range useful for transferring sensitive information.

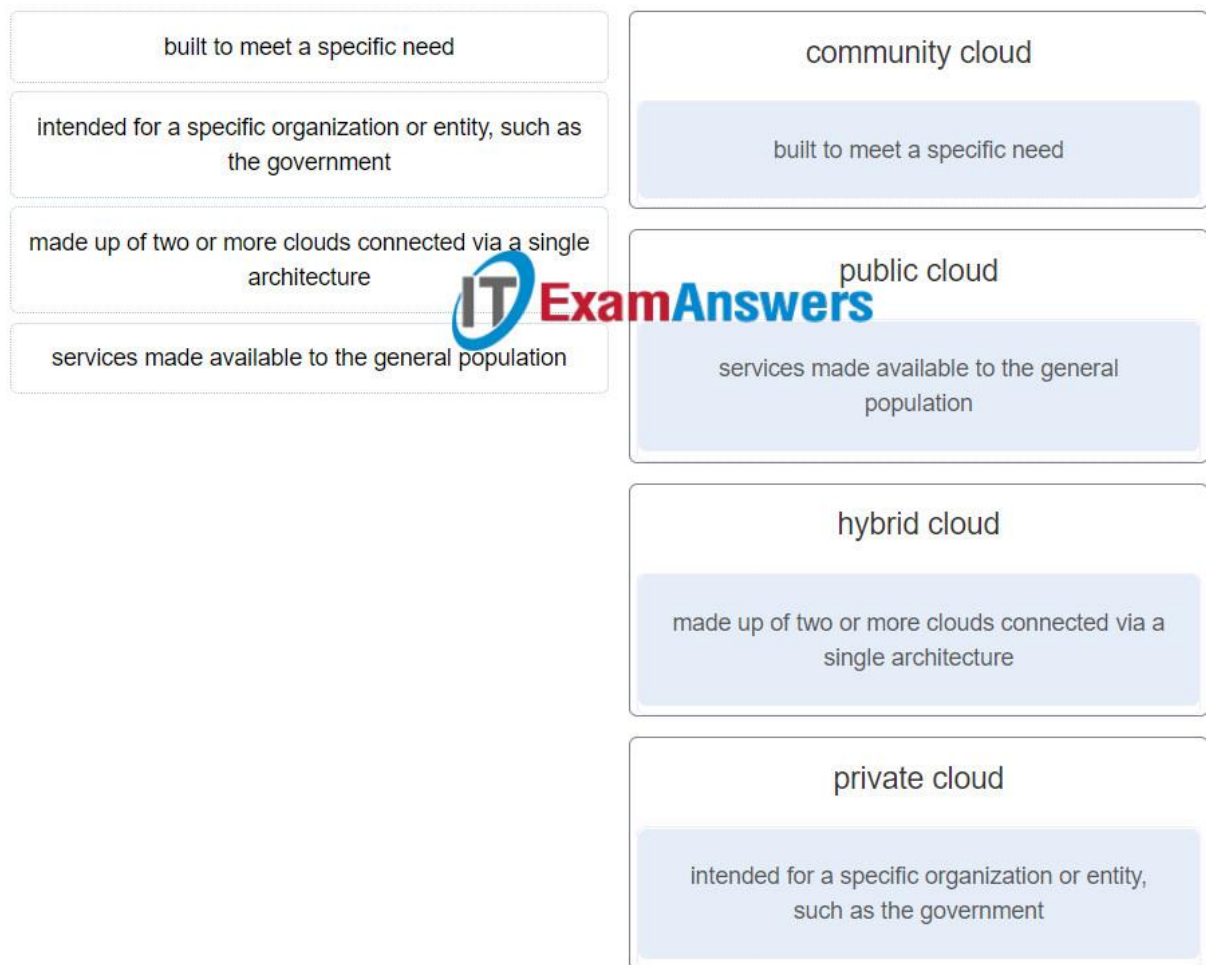
## IT Essentials (Version 8.0) Chapter 9 Exam Answers ITE v8.0

1. Which cloud model provides services for a specific organization or entity?

- a community cloud
- **a private cloud**
- a public cloud
- a hybrid cloud

**Explanation:** Private clouds are used to provide services and applications to a specific organization and may be set up within the private network of the organization or managed by an outside organization.

2. Match the definition to the type of cloud.



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- built to meet a specific need. → **Community cloud**
- Intended for a specific organization or entity, such as the government. → **private cloud**
- Made up of two or more clouds connected via a single architecture – **> hybrid cloud**
- Services made available to the general population. → **public cloud**

**Explanation:** Public cloud services are made available to the general population. Private cloud services are intended for a specific organization or entity. A custom cloud is built to meet the needs of a specific industry. A hybrid cloud is made up of two or more clouds that are connected via a single architecture.

**3. A small college wishes to deploy a learning management system (LMS) and is looking for a hosted solution. Which type of cloud-based solution would help the college to achieve the goal?**

- **virtual application stream**
- Dropbox
- virtual desktop infrastructure
- Office 365

**Explanation:** The cloud-based virtual application stream, or cloud-based applications, can provide on-demand software application delivery to end

users. In the case of LMS, when a user needs to use the web-based service, the user will open a client (web browser) to access the system. Minimal application code is then forwarded to the client based on the information the user needs.

**4. How does virtualization help with disaster recovery within a data center?**

- **support of live migration**
- guarantee of power
- improvement of business practices
- supply of consistent air flow

**Explanation:** Live migration allows moving of one virtual server to another virtual server that could be in a different location that is some distance from the original data center.

**5. Which type of hypervisor would most likely be used in a data center?**

- **Type 1**
- Hadoop
- Nexus
- Type 2

**Explanation:** The two type of hypervisors are Type 1 and Type 2. Type 1 hypervisors are usually used on enterprise servers. Enterprise servers rather than virtualized PCs are more likely to be in a data center.

**6. A training company offers many application courses based on Windows. The company is looking for a solution to provide a hands-on learning and practice environment to remote learners. The goal is to provide a uniform learning environment to all users. Which cloud-based solution would help the company to achieve the goal?**

- Office 365
- Google Drive
- virtual application stream
- **virtual desktop infrastructure**

**Explanation:** Virtual desktop infrastructure (VDI) can be used to deploy entire desktop environments from a server in a data center to clients. VDIs can be persistent, which provides the user with a customizable image that is saved for future use, or non-persistent, which reverts the image back to its initial state when a user logs out.

**7. A small company is considering moving many of its data center functions to the cloud. What are three advantages of this plan? (Choose three.)**

- Cloud services enable the company to own and administer its own servers and storage devices.
- Cloud services are billed at a fixed fee no matter how much processing and storage are used by the company.
- **The company does not need to be concerned about how to handle increasing data storage and processing demands with in-house data center equipment.**

- Single-tenant data centers can easily grow to accommodate increasing data storage requirements.
- **The company only needs to pay for the amount of processing and storage capacity that it uses.**
- **The company can increase processing and storage capacity as needed and then decrease capacity when it is no longer needed.**

**Explanation:** Cloud computing offers many advantages to the company. Since the cloud data storage and processing facilities are owned by third-parties, the company does not need to be concerned about how it will handle increasing data storage and processing demands with its own data center equipment. The company can easily increase or decrease processing power and storage capacity based on need. Also, cloud services are billed by usage, so the company does not have the costs of supporting its own expensive data center that is not always used to maximum capacity.

#### 8. What is the main function of a hypervisor?

- It is software used to coordinate and prepare data for analysis.
- It is used by ISPs to monitor cloud computing resources.
- It is a device that synchronizes a group of sensors.
- It is a device that filters and checks security credentials.
- **It is used to create and manage multiple VM instances on a host machine.**

**Explanation:** A hypervisor is a key component of virtualization. A hypervisor is often software-based and is used to create and manage multiple VM instances.

#### 9. A software company has groups of developers located in different cities around the world. The company is using a cloud-based development environment so that all developers can access the same software development tools. Which cloud service is used by the company?

- ITaaS
- IaaS
- SaaS
- **PaaS**

**Explanation:** With PaaS (platform as a service), a cloud provider provides access to operating systems, development tools, programming languages, and libraries used to develop, test, and deliver applications.

#### 10. What is a difference between the functions of Cloud computing and virtualization?

- Cloud computing provides services on web-based access whereas virtualization provides services on data access through virtualized Internet connections.
- **Cloud computing separates the application from the hardware whereas virtualization separates the OS from the underlying hardware.**



- Cloud computing utilizes data center technology whereas virtualization is not used in data centers.
- Cloud computing requires hypervisor technology whereas virtualization is a fault tolerance technology.

**Explanation:** Cloud computing separates the application from the hardware. Virtualization separates the OS from the underlying hardware. Virtualization is a typical component within cloud computing. Virtualization is also widely used in data centers. Although the implementation of virtualization facilitates an easy server fault tolerance setup, it is not a fault tolerance technology by design. The Internet connection from a data center or service provider needs redundant physical WAN connections to ISPs.

**11. Which type of Hypervisor is implemented when a user with a laptop running the Mac OS installs a Windows virtual OS instance?**

- **type 2**
- bare metal
- type 1
- virtual machine

**Explanation:** Type 2 hypervisors, also known as hosted hypervisors, are installed on top of an existing operating system, such as Mac OS, Windows, or Linux.

**12. A freelance reporter wishes to use a service that allows files to be accessed at any time from any device. Whenever the reporter starts the laptop and connects to the internet, the files stored on the laptop must be synchronized with the service automatically. Which solution will meet the requirements?**

- Office 365
- Exchange Online
- virtual desktop infrastructure
- **Dropbox**

**Explanation:** The service needed is a cloud-based storage solution with automatic synchronization. Dropbox is an example of such a solution. Office 365 provides cloud-based applications. Exchange Online is a cloud-based email client. A virtual desktop infrastructure provides a cloud-based virtual desktop environment.

**13. An international civil engineering association has members from all over the world. The research division of the association plans to have a cloud-based service to share research ideas and to promote collaboration among members in multiple divisions of the association. Which cloud model is suitable for them?**

- **community**
- public
- hybrid
- private

**Explanation:** A community cloud is a cloud service created for exclusive use by a specific community. The professional association contains members from all over the world and each of them works within the same organization.

**14. Which Cloud computing service would be best for an organization that does not have the technical knowledge to host and maintain applications at their local site?**

- IaaS
- **SaaS**
- ITaaS
- PaaS

**Explanation:** Software as a Service (SaaS) allows a business to host an application through a Cloud provider. The Cloud provider manages access to the application and maintains the application. The application can be utilized by any authorized device with an Internet connection.

**15. Which is a characteristic of a Type 1 hypervisor?**

- installed on an existing operating system
- does not require management console software
- best suited for consumers and not for an enterprise environment
- **installed directly on a server**

**Explanation:** Type 1 hypervisors are installed directly on a server and are known as “bare metal” solutions giving direct access to hardware resources. They also require a management console and are best suited for enterprise environments.

**16. Which statement describes a characteristic of cloud computing?**

- Investment in new infrastructure is required in order to access the cloud.
- **Applications can be accessed over the Internet by individual users or businesses using any device, anywhere in the world.**
- Devices can connect to the Internet through existing electrical wiring.
- A business can connect directly to the Internet without the use of an ISP.

**Explanation:** Cloud computing allows users to access applications, back up and store files, and perform tasks without needing additional software or servers. Cloud users access resources through subscription-based or pay-per-use services, in real time, using nothing more than a web browser.

**17. What are two advantages of using PC virtualization? (Choose two.)**

- It boosts the performance of the host machine through virtualization.
- It prevents viruses and worms from functioning in a virtualized environment.
- **It allows multiple operating systems to run on a single PC simultaneously.**
- It allows network threat identification.
- **It can provide cost savings.**

**Explanation:** Benefits of virtualization include cost savings, the use of multiple operating systems on a single PC, and isolation for software testing.

**18. A technician needs to use an application that is not supported by Windows operating systems on the PC. How can the technician make this application run on the PC?**

- **Create a virtual machine with an operating system that supports the application.**
- Install the application in safe mode.
- Use the Windows Compatibility mode.
- Install the application with elevated permissions as administrator.

**Explanation:** Windows Compatibility mode will only allow an application to run as long as it is supported by the Windows operating system. The application cannot be installed if the operating system does not support it. It is necessary in this case to create a virtual machine with an operating system, as the guest OS, that supports the application.

**19. Which technology automatically and rapidly re-configures network topologies to achieve flexible and responsive networks?**

- hosted hypervisor
- **software-defined networking**
- infrastructure as a service
- hybrid cloud computing

**Explanation:** Software-defined networking automatically and rapidly re-configures networking topologies to achieve flexible and responsive networks. Hybrid cloud computing consists of two cloud types connected through a single architecture. Infrastructure provides organizations access to network equipment, virtualized network services, storage, software, and supporting network infrastructure. A hosted hypervisor is operating system-based software used on a host computer to create and manage virtual machines.

**20. What technology allows users to access data anywhere and at any time?**

- virtualization
- data analytics
- micromarketing
- **Cloud computing**

**Explanation:** Cloud computing allows organizations to eliminate the need for on-site IT equipment, maintenance, and management. Cloud computing allows organizations to expand their services or capabilities while avoiding the increased costs of energy and space.

**21. Which two business and technical challenges does implementing virtualization within a data center help businesses to overcome? (Choose two.)**

- server hardware needs
- operating system license requirements
- virus and spyware attacks
- **physical footprint**

- **power and air conditioning**

**Explanation:** Traditionally, one server was built within one machine with one operating system. This server required power, a cool environment, and a method of backup. Virtualized servers require more robust hardware than a standard machine because a computer or server that is in a virtual machine commonly shares hardware with one or more servers and operating systems. By placing multiple servers within the same physical case, space is saved. Virtualized systems still need the proper licenses for operating systems or applications or both and still need the proper security applications and settings applied.

**22. Every time a user turns on the computer in the morning, the user hears a loud clicking noise. Which device should the technician check first?**

- RAM
- sound card
- **hard drive**
- internal speaker

**Explanation:** If a hard drive makes repeated clicking or tapping sounds when the computer is idle, the hard drive is failing. Make a backup and replace the drive as soon as possible. Invalid boot disk errors and files that suddenly will not open are symptoms of hard drive issues.

**23. When a co-worker steps into another office, the co-worker notices that the computer is making a loud clicking noise and asks about it. The technician is contacted to investigate. Which device should the technician check first?**

- monitor
- internal speaker
- **hard drive**
- sound card

**Explanation:** If a hard drive makes repeated clicking or tapping sounds when the computer is idle, the hard drive is failing. Make a backup and replace the drive as soon as possible. Invalid boot disk errors and files that suddenly will not open are symptoms of hard drive issues.

**24. While a technician is installing a printer, the technician hears a loud clicking noise. Which device should the technician check first?**

- RAM
- power supply
- motherboard
- **hard drive**

**Explanation:** If a hard drive makes repeated clicking or tapping sounds when the computer is idle, the hard drive is failing. Make a backup and replace the drive as soon as possible. Invalid boot disk errors and files that suddenly will not open are symptoms of hard drive issues.

**25. A college uses virtualization technology to deploy information security courses. Some of the lab exercises involve studying the characteristics of**

**computer viruses and worms. What is an advantage of conducting the lab exercises inside the virtualized environment as opposed to using actual PCs?**

- The lab exercises are performed faster inside of the virtualized environment.
- The virtualization environment has better tools to develop mitigation solutions.
- The viruses and worms will have limited functionality inside the virtualized environment.
- **Virus and worm attacks are more easily controlled in a virtualized environment, thus helping to protect the college network and its devices from attack.**

**Explanation:** Virtualization can create a controlled environment that is isolated from external networks. Because of shared system resources, the performance inside a virtual environment will not be faster. However, the benefit is that a virtual environment provides a safe platform for information security analysis.

**26. Which is a characteristic of a Type 2 hypervisor?**

- best suited for enterprise environments
- installs directly on hardware
- **does not require management console software**
- has direct access to server hardware resources

**Explanation:** Type 2 hypervisors are hosted on an underlying operating system and are best suited for consumer applications and those experimenting with virtualization. Unlike Type 1 hypervisors, Type 2 hypervisors do not require a management console and do not have direct access to hardware.

**27. While working in a computer training room, the technician notices that one computer emits a loud clicking noise. Which device should the technician check first?**

- sound card
- **hard drive**
- internal speaker
- RAM

**Explanation:** If a hard drive makes repeated clicking or tapping sounds when the computer is idle, the hard drive is failing. Make a backup and replace the drive as soon as possible. Invalid boot disk errors and files that suddenly will not open are symptoms of hard drive issues.

**28. A software engineer is involved in the development of an application. For usability tests, the engineer needs to make sure that the application will work in both Windows 7 and Windows 8 environments. The features and functions must be verified in the actual OS environment. The engineer is using a Windows 7 workstation. What two technologies can help the engineer achieve the usability tests? (Choose two.)**

- **dual boot**

- two separate CPUs
- **client-side virtualization**
- storage redundancy
- two separate hard disks

**Explanation:** Client-side virtualization enables a host OS to provide a virtual environment within which a guest OS can be installed and be operational as an actual OS. The dual boot configuration will provide an option to run either OS (but not both at the same time). Just using two disks is not a sufficient solution to run two separate OS.

## 29. True or False.

**Cloud computing and virtualization are different terms that refer to the same thing.**

- true
- **false**

**Explanation:** False. Although the terms cloud computing and virtualization are often used interchangeably, they actually mean two different things. Virtualization is a component within cloud computing that separates the operating systems from the underlying hardware, whereas cloud computing separates the application from the hardware.

## 30. When a user turns on a workstation, the screen displays an “Invalid Boot Disk” error. The user calls the help desk. Which device should the technician check first?

- power supply
- **hard drive**
- internal speaker
- sound card

**Explanation:** If a hard drive makes repeated clicking or tapping sounds when the computer is idle, the hard drive is failing. Make a backup and replace the drive as soon as possible. Invalid boot disk errors and files that suddenly will not open are symptoms of hard drive issues.

## 31. A computer user logs a problem stating that the computer is emitting a loud clicking noise. Which device should the technician check first?

- **hard drive**
- CPU fan
- power supply
- motherboard

**Explanation:** If a hard drive makes repeated clicking or tapping sounds when the computer is idle, the hard drive is failing. Make a backup and replace the drive as soon as possible. Invalid boot disk errors and files that suddenly will not open are symptoms of hard drive issues.

# IT Essentials (Version 8.0) Chapter 10 Exam Answers ITE v8.0

**1. A support technician wants to upgrade a system to Windows 10 but is unsure whether the hardware and software on the existing system are compatible. What tool or utility would be the best choice for the user?**

- Windows Easy Transfer
- Cortana Virtual Assistant
- **Get Windows 10 app**
- User State Migration Tool

**2. True or False? When a user is working on a system that uses a network file system, there is no difference between accessing a file stored locally or on another computer on the network.**

- **True**
- False

**3. Which file system is used to access files over a network?**

- **NFS**
- CDFS
- FAT
- NTFS

**Explanation:** NFS (Network File System) is used to access files on other computers across a network. Windows operating systems support several file systems. FAT, NTFS, and CDFS are used to access files stored on drives installed in the computer.

**4. Which command line utility was developed by Microsoft to allow users to transfer files and settings to a new edition of Windows OS during an upgrade to Windows 10?**

- Windows Upgrade Assistant
- Windows Easy Transfer
- **User State Migration Tool**
- PCmover Express

**Explanation:** The User State Migration Tool (USMT) is a command line utility program developed by Microsoft that allows users to transfer files and settings between Windows PCs. Windows Easy Transfer is not available in Windows 10. PCmover Express is third party software. Windows Upgrade Assistant is used to prepare a computer for upgrading by checking for compatibility issues and downloading all necessary files to start the installation process.



**5. Select the Windows 10 version that best meets the described use.**

IT Exam Answers

Used for personal computing and gaming with built-in features like family safety and parental control.

Windows 10 Home

Used in an academic environment with volume licensing options.

Windows 10 Education

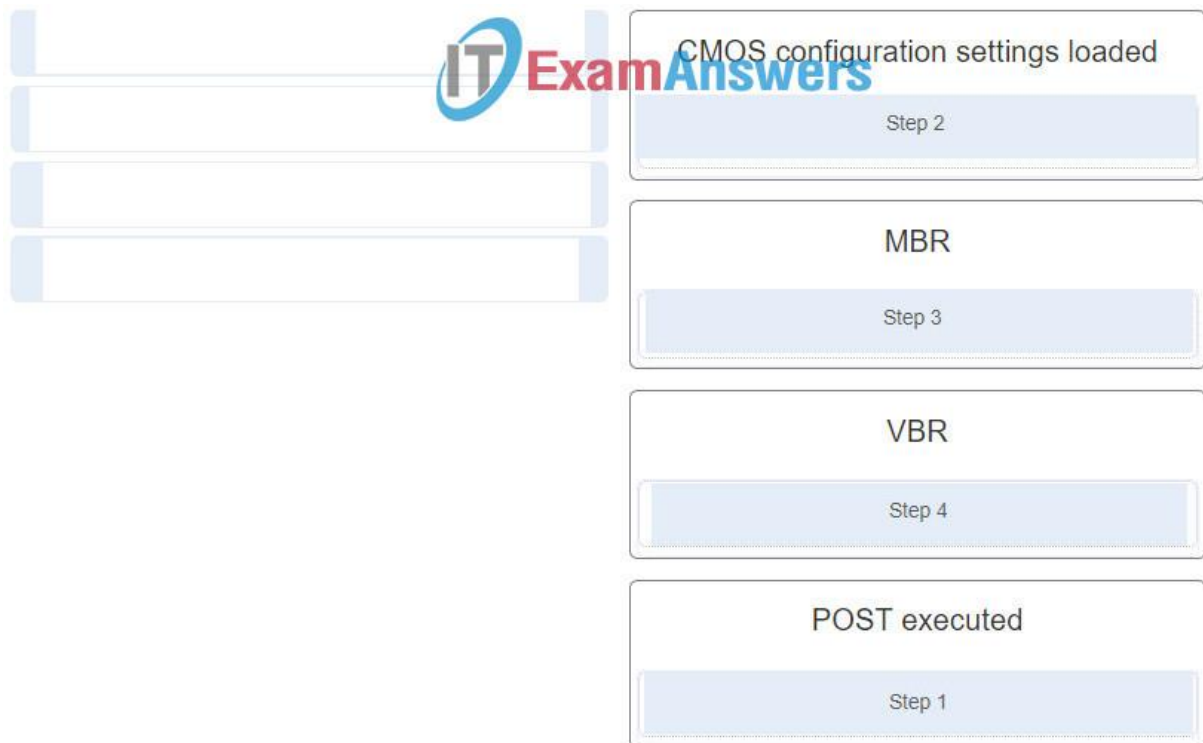
Used in small business environments with built-in security, productivity, and management features.

Windows 10 Pro

Used in large to mid-size business environments requiring advanced security and management features.

Windows 10 Enterprise

**6. Match the steps that will lead to the loading of bootmgr.exe in a 32 bit Windows 10 environment.**



IT Essentials ( Version 8.0) – IT Essentials 8.0 Chapter 10 exam Q6

**7. What term is used to describe a logical drive that can be formatted to store data?**

- volume
- **partition**
- cluster
- track
- sector

**Explanation:** Hard disk drives are organized by several physical and logical structures. Partitions are logical portions of the disk that can be formatted to store data. Partitions consist of tracks, sectors, and clusters. Tracks are concentric rings on the disk surface. Tracks are divided into sectors and multiple sectors are combined logically to form clusters

**8. When would the PXE option be used when repairing a PC?**

- The display cannot be seen clearly.
- There is no response from the mouse or keyboard.
- A newly installed application caused the system to perform erratically.
- **The computer needs a replacement operating system.**

**Explanation:** The Preboot eXecution Environment (PXE, but pronounced pixie) BIOS boot option is used to install an operating system from a remote network location.

**9. Which statement describes dynamic disks in a PC that is running Windows 10 Pro?**

- A partition created on a dynamic disk can be shrunk without deleting the partition first.

- More space can be added to a partition by extending it into adjacent, unallocated space, as long as it is contiguous.
- Free space can only be added from the same disk to extend the volume.
- **They have the ability to create volumes that span across more than one disk.**

**Explanation:** A dynamic disk has the ability to create volumes that span across more than one disk. The size of the partitions can be changed after they have been set, even if the unallocated space is noncontiguous. However, the partition size cannot be reduced without loss of data.

**10. What are two types of computer user interface? (Choose two.)**

- **CLI**
- OpenGL
- PnP
- API
- **GUI**

**Explanation:** Two types of computer operating system user interfaces are CLI and GUI. CLI stands for command-line interface. In a command-line interface, a user enters commands at a prompt using a keyboard. The second type is the GUI, or graphical user interface. With this type of user interface, a user interacts with the operating system by working with icons and menus. A mouse, finger, or stylus can be used to interact with a GUI. PnP is the name of a process by which an OS assigns resources to different hardware components of a computer. The other answers are examples of Application Programming Interfaces, or APIs.

**11. Which key, when pressed during the boot process, will allow the user to choose to start Windows in safe mode?**

- Esc
- Windows
- **F8**
- F1

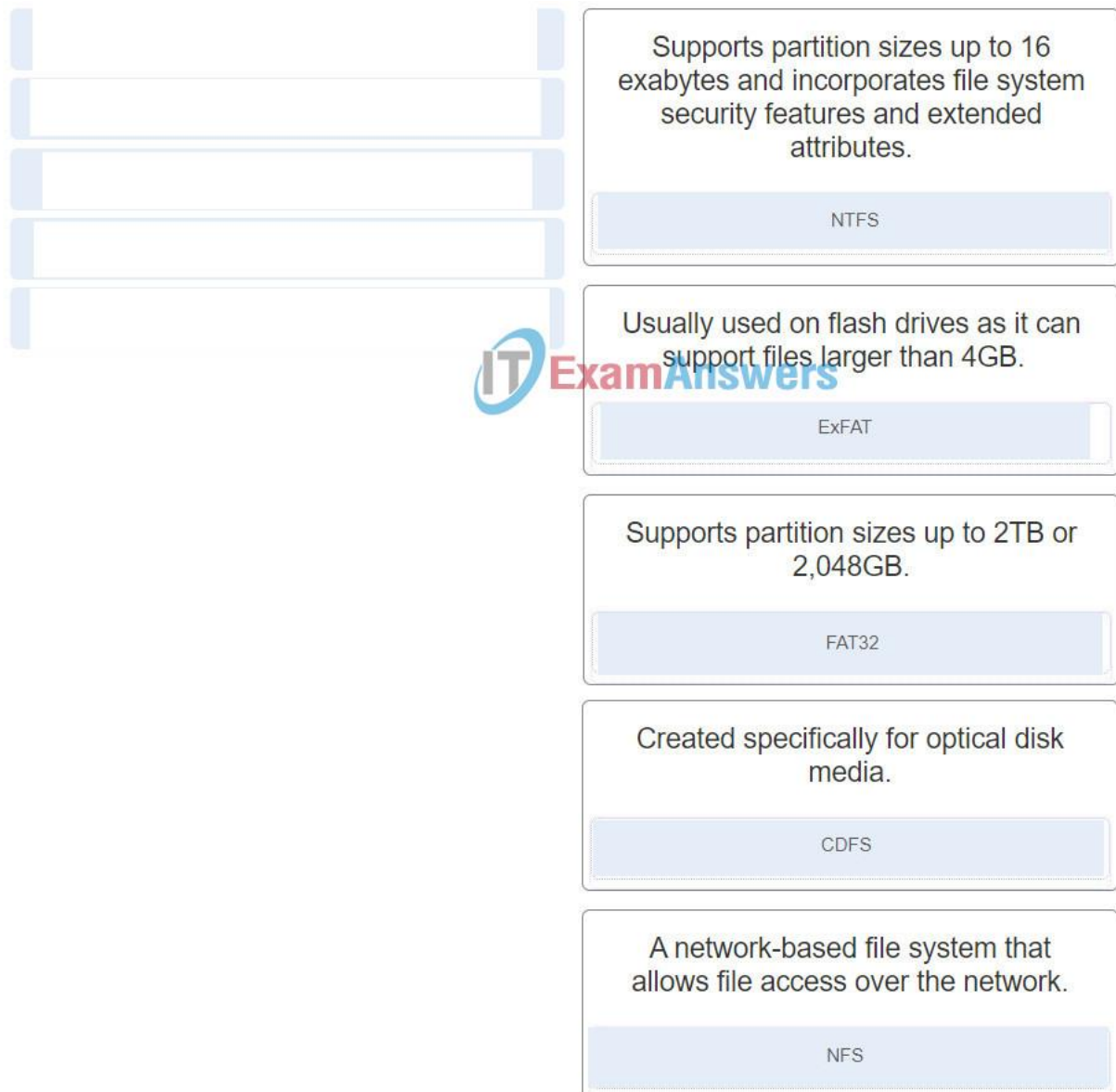
**Explanation:** Pressing the F8 key during the boot process will allow the user to choose to start the computer in Safe mode.

**12. Which statement accurately describes the GUID partition table?**

- It cannot be used in a multiboot environment.
- It is not supported by Windows 10 Home edition.
- **It is commonly used in computers with UEFI firmware.**
- It is 512 bytes long and contains the boot loader.

**Explanation:** The GUID partition table, also referred to as GPT, expands on the limitations of the MBR and is commonly used in systems with UEFI firmware.

**13. Match the file system with the respective description.**



IT Essentials ( Version 8.0) – IT Essentials 8.0 Chapter 10 exam Q13

**14. A technician wishes to deploy Windows 10 Pro upgrade to a group of employee PCs on the network and ensure that the user state migrates successfully. Which tool would the technician use to do this?**

- Windows 10 Update Assistant
- Windows Easy Transfer
- **User State Migration**
- PCmover Express

**Explanation:** USMT (User Migration State tool) is part of the Windows Assessment and Deployment Kit that can be used to streamline and simplify user state migration during large deployments of Windows operating systems.

**15. What feature of an operating system allows it to support two or more CPUs?**

- multitasking
- **multiprocessing**

- multiuser support
- multithreading

**Explanation:** Multiprocessing allows an operating system to use two or more CPUs. Support for two or more users is provided by the multiuser feature. Multitasking allows multiple applications to run at the same time. Multithreading allows different parts of the same program to run at the same time.

**16. A user installs a new sound card driver in a computer that is working properly. After the installation of the drivers for the new sound card, the computer fails to boot. Which quick fix can the user implement to return to the previous working state?**

- Boot to Emergency Recovery State.
- Boot to Start Windows Normally.
- **Boot to Last Known Good Configuration.**
- Boot to Recovery Console.

**Explanation:** The last known Good Configuration is a copy of the last registry that is saved on successful login. Care should be exercised never to log in when you suspect any system instability because once you log in successfully, the Last Known Good Configuration will be overwritten with the current one.

**17. Which term best describes the process of breaking a program into smaller parts that can be loaded as needed by the operating system?**

- multiuser
- multiprocessing
- multitasking
- **multithreading**

**Explanation:** Thread is a small piece of a program in execution. Multiprocessing is related to a system with more than one processor. Multi-user is related to a system that supports more than one user at the same time. Multitask is a system that can perform more than one task at the same time.

**18. Which component of a CPU architecture allows the CPU immediate access to data?**

- RAM
- CMOS
- **registers**
- cache

**Explanation:** Registers are memory locations that are part of the architecture of a CPU. They provide a storage location for the logical functions performed on data.

**19. What are two default account types provided by Windows 10? (Choose two.)**

- Guest
- DefaultAccount
- **Standard User**
- **Administrator**

- Users

**Explanation:** Windows 10 offers two account types, namely, Administrator and Standard User. Guest is a built-in user account. DefaultAccount is a user account managed by the system. Users is a user group.

**20. Which operation in Windows 10 is limited to users with Administrator privileges only?**

- Run applications.
- **Install software programs.**
- Change system settings.
- Modify user settings.

**Explanation:** Administrator accounts have complete control over a computer. Standard user accounts have limited control over a computer. They can run applications, but cannot install programs. A standard user account can change system settings but only settings that do not affect other user accounts.

**21. Which statement describes formatting?**

- It is used to boot an operating system by default.
- It is a section of an extended partition on an MBR. It can be used to separate information for administrative purposes.
- **It is a process to create a file system in a partition or volume for file storage.**
- It is often used to organize data storage by subdividing it into as many as 23 logical sections.

**22. What is a possible situation when it might be necessary to boot Windows 7 from a USB device, a CD, or a DVD?**

- to disable background services
- to delete registry keys
- **to repair the system**
- to partition the hard drive

**Explanation:** Disabling background services, deleting registry keys, and partitioning the hard drive do not require rebooting a PC. It might be necessary to boot a computer from a USB drive in order to repair the system in some situations.

**23. Which statement describes a primary partition?**

- It is a section of an extended partition on an MBR. It can be used to separate information for administrative purposes.
- It is a type of disk with the ability to create volumes that span across more than one disk even if the unallocated space is noncontiguous.
- **It is a physical section of a hard disk. It can contain an operating system to boot the system and cannot be subdivided.**
- It is often used to organize data storage by subdividing it into as many as 23 logical sections.

**24. Which program file is loaded by the boot manager in a Windows boot process?**

- sysprep.exe

- ntoskrnl.exe
- winlogon.exe
- **winload.exe**

**Explanation:** During a Windows boot process, once the boot manager, bootmgr.exe, has the control of the boot process, it first loads the Windows boot loader, winload.exe.

**25. Which tab would be used to set the priority for a process in Windows 10 Task Manager?**

- Performance
- Startup
- **Details**
- Services

**Explanation:** The Windows 10 Task Manager has seven tabs. The Details tab allows setting a priority for a process.

**26. True or False? Multithreading describes an operating system that can support two or more CPUs.**

- **False**
- True

**27. What is the default file system used during a fresh installation of Windows 7?**

- HPFS
- **NTFS**
- FAT16
- FAT32

**Explanation:** While Windows XP can use either FAT or NTFS, Vista and Windows 7 can only be installed on an NTFS partition.

**28. True or False? Smartphones require an operating system before they can be operated.**

- **True**
- False

**29. A manager wants to install Windows 10 directly onto a computer and needs help with the setup process. What tool or utility would be the best choice for the user?**

- User State Migration Tool
- Windows Easy Transfer
- Windows Boot Manager
- **Upgrade Assistant**

**30. Which statement describes the active partition?**

- It is a section of an extended partition on an MBR. It can be used to separate information for administrative purposes.
- **It is used to boot an operating system by default.**
- It is a type of disk with the ability to create volumes that span across more than one disk even if the unallocated space is noncontiguous.



- It is often used to organize data storage by subdividing it into as many as 23 logical sections.

**31. Which statement describes the active partition?**

- It is a section of the disk, that is inaccessible to the user, containing an image that can be used to restore the computer to its original configuration.
- It is a process to create a file system in a partition or volume for file storage.
- **It is used to boot an operating system by default.**
- It is a type of disk with the ability to create volumes that span across more than one disk even if the unallocated space is noncontiguous.

**32. Which statement describes an extended partition?**

- It is a section of the disk, that is inaccessible to the user, containing an image that can be used to restore the computer to its original configuration.
- It is a process to create a file system in a partition or volume for file storage.
- It is a type of disk with the ability to create volumes that span across more than one disk even if the unallocated space is noncontiguous.
- **It is often used to organize data storage by subdividing it into as many as 23 logical sections.**

**33. Which statement describes the master boot record (MBR)?**

- It is a section of the disk, that is inaccessible to the user, containing an image that can be used to restore the computer to its original configuration.
- It is a process to create a file system in a partition or volume for file storage.
- **It takes the first 512 bytes on the disk and contains the boot loader, an executable program that allows a user to choose from multiple operating systems.**
- It is a type of disk with the ability to create volumes that span across more than one disk even if the unallocated space is noncontiguous.

**34. True or False? Multitasking describes a computer operating system that is capable of running multiple applications at the same time.**

- **True**
- False

**35. Which statement describes a logical drive?**

- It is a section of the disk, that is inaccessible to the user, containing an image that can be used to restore the computer to its original configuration.
- It is a process to create a file system in a partition or volume for file storage.
- **It is a section of an extended partition on an MBR. It can be used to separate information for administrative purposes.**
- It is a type of disk with the ability to create volumes that span across more than one disk even if the unallocated space is noncontiguous.

36. Which statement describes the master boot record (MBR)?

- **It takes the first 512 bytes on the disk and contains the boot loader, an executable program that allows a user to choose from multiple operating systems.**
- It is a process to create a file system in a partition or volume for file storage.
- It is a type of disk with the ability to create volumes that span across more than one disk even if the unallocated space is noncontiguous.
- It is a section of an extended partition on an MBR. It can be used to separate information for administrative purposes.

37. True or False? The registry is a database that only contains information about the device drivers on a computer.

- **False**
- True

38. A technician has just purchased a new Windows 10 PC and wants to transfer selected files, folders, profiles, and applications from the old Windows PC. What tool or utility would be the best choice for the user?

- Upgrade Assistant
- User State Migration Tool
- **PCmover Express**
- Windows Task Manager

**Explanation:** PCmover Express is the software tool recommended by Microsoft to automatically moves files, settings, and user profiles from an old PC to a new one. The free version is no longer available, and there is a cost to use it from LapLink.

39. A technician needs to capture the company user accounts, files, operating system settings, and application settings for migration into the new Windows 10 installation. What tool or utility would be the best choice for the user?

- **User State Migration Tool**
- Upgrade Assistant
- Windows Easy Transfer
- WinLoad

40. True or False? DirectX is a collection of APIs related to multimedia tasks for Microsoft Windows.

- **True**
- False

41. Which operating system does not support Windows Easy Transfer to transfer information from one computer to another?

- Windows 8
- **Windows 10**
- Windows Vista
- Windows 7

**Explanation:** Windows Easy Transfer is not supported in Windows 10 and is replaced with PCmover Express.

42. An analyst is running Windows 7 on the PC and is planning to migrate to Windows 8.1. The analyst wants help migrating the personal files and settings into the newer version. What tool or utility would be the best choice for the user?

- Upgrade Assistant
- User State Migration Tool
- Application manager
- **Windows Easy Transfer**

43. True or False? Modern operating systems boot the computer, manage the file system, and support only one user, task, or CPU.

- **False**
- True

44. At the end of the boot process of Windows 10, the login program file winlogon.exe loads. Which program loads winlogon.exe?

- hal.dll
- winload.exe
- sysprep.exe
- **ntoskrnl.exe**

**Explanation:** During a Windows 10 boot process, after the Windows kernel, ntoskrnl.exe, takes over the process, it starts the login file, winlogon.exe and displays the Windows Welcome screen.

45. True or False? When a hardware device is installed, the operating system needs to use a device driver to access and use that hardware.

- **True**
- False

46. True or False? Windows 10 64-bit version can be installed on as little as 1GB of hard drive space.

- **False**
- True

47. Which statement is a feature of the Windows 8 operating system?

- It uses the Aero user interface.
- **It supports a touch screen interface.**
- It can be directly upgraded from Windows XP.
- It is a 128-bit operating system.

**Explanation:** One of the features introduced with the Windows 8 operating system was the support for a touch screen interface to allow use on phones and tablets.

48. True or False? A 32-bit operating system can address up to a maximum of 4 GB of RAM.

- **True**
- False

49. Which statement describes a recovery partition?

- **It is a section of the disk, that is inaccessible to the user, containing an image that can be used to restore the computer to its original configuration.**

- It is a process to create a file system in a partition or volume for file storage.
- It is a type of disk with the ability to create volumes that span across more than one disk even if the unallocated space is noncontiguous.
- It is a section of an extended partition on an MBR. It can be used to separate information for administrative purposes.

## IT Essentials (Version 8.0) Chapter 11 Exam Answers ITE v8.0

**1. A user tries to install an application on a Windows 10 Pro PC but it fails. The user tries to uninstall the application but it fails to uninstall. What option can be used to address this issue without loss of data or applications?**

- Use Advanced Start-up.
- **Use Restore Point.**
- Uninstall and reinstall the device using device manager.
- Restart the Windows Update services.

**2. A user is troubleshooting a connectivity issue from the PC to a web server and wants to see a list of the traffic stops between the PC and the web server. What is the best Windows command to select to do the job?**

- bootrec
- diskpart
- recover
- **tracert**
- tasklist

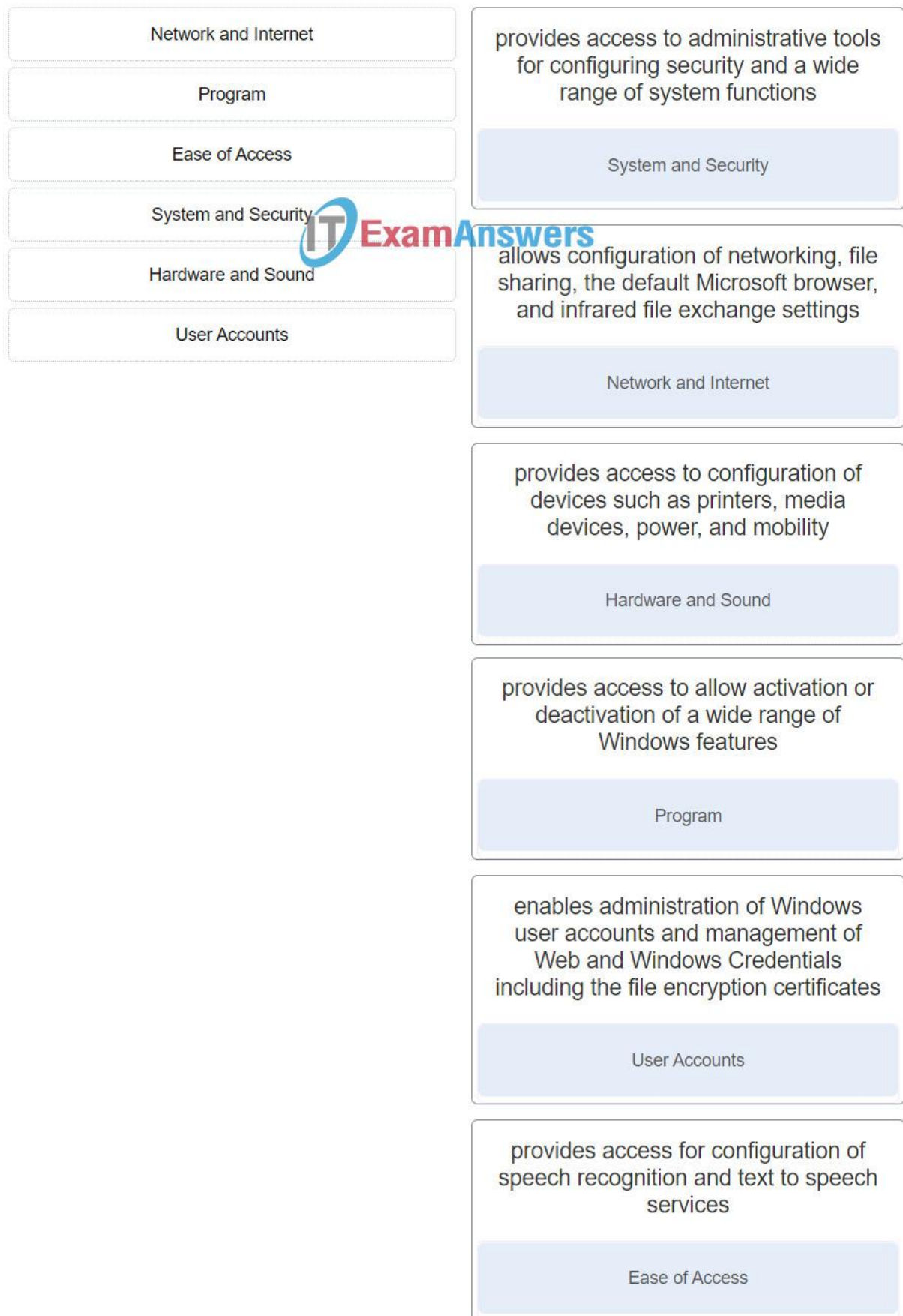
**3. Match the Windows 10 Registry key with its description. (Not all options are used.)**

IT ExamAnswers

HKKEY_LOCAL_MACHINE	all of the configuration settings for the hardware and software configured on the computer for all users
HKEY_CURRENT_USER	
HKEY_CLASSES_ROOT	HKEY_USERS
HKEY_USERS	settings about the file system, file associations, shortcuts used when you ask Windows to run a file, or view a directory
HKEY_CURRENT_CONFIG	
	HKEY_CLASSES_ROOT
	data about the preferences of the currently logged on user, including personalization settings, default devices, and programs, etc
	HKEY_CURRENT_USER
	information about the current hardware profile of the machine
	HKEY_CURRENT_CONFIG

IT Essentials ( Version 8.0) – IT Essentials 8.0 Chapter 11 exam Q3

**4. Match the categories in the Windows 10 Control Panel to the function.**



5. Which three levels of RAID are supported by Windows 10 Pro? (Choose three.)

- 5
- 0
- 4
- 3
- 1

**Explanation:** Windows 10 Pro supports RAID levels 0 (Spanned), 1 (Mirrored), and 5 (Stripping with Parity).

6. A user calls the help desk and reports that the workstation, when powering up, displays error messages about an invalid system disk or invalid boot disk. When a technician comes to the office, the user mentions that the workstation was working well the day before. The technician checks the workstation and makes sure that the cable is firmly connected between the hard drive and the motherboard. What is another likely cause of the problem?

- A recently installed device driver is incompatible with the boot.
- The boot service fails to start.
- Some of the operating system files may be corrupted.
- **The MBR/GPT is corrupted.**

**Explanation:** These error messages indicate that the workstation cannot detect the hard drive as a bootable device. One possible cause is that the MBR/GPT on the hard drive is corrupted so that the workstation cannot locate a valid partition that holds the necessary codes to start booting.

7. A technician is attempting to diagnose and rectify a common boot problem on a Windows 10 installation. Which Windows 10 advanced recovery option should the technician use?

- **Startup Repair**
- Reset
- System Image Recovery
- System Restore

**Explanation:** The Windows Startup Repair option can be used once the system is in recovery mode to fix common boot issues. Common boot problems that can be addressed by Startup Repair are repairing the MBR, repairing the boot sector, and adding missing Windows installations to the Boot Configuration Database (BCD).

8. A user of a Windows 10 PC wants to automatically sync the user profile across various Windows 10 devices that the user owns. How can the user accomplish this?

- **Have the user sign into all devices with the Microsoft account of the user.**
- Use gpupdate to propagate the group policy to other devices.
- Ensure that the user is in the proper group so that the group policy will be applied.



- Make sure that OneDrive file sync is disabled.

**Explanation:** A Microsoft account is required to sync data between devices, to access OneDrive, and to work with parental controls of the Child account. It allows access to Microsoft cloud services and syncs desktop settings and profiles across multiple devices. For this to occur, all devices must be signed in with the same Microsoft account.

**9. Which question is an open ended question that could be used when helping a customer troubleshoot a Windows problem?**

- **What programs have you installed recently?**
- Have you changed your password recently?
- Can you boot the operating system?
- Do you get a login prompt when the computer boots?

**Explanation:** Closed ended questions tend to have a yes/no response. Open ended questions leave more room for the customer to explain in more detail. Technicians should use open ended questions to help identify the problem.

**10. A user is reporting that a file has been shared specifically with another user on the network, but the other user opens the file and is unable to save it once edited. What is the probable cause?**

- The file has the Archive attribute enabled.
- The user forgot to share the parent folder.
- **The user shared the document with Read permissions.**
- The file has been deleted.

**Explanation:** The permission setting should have been Change or Full Control. The Read permission does not allow edited files to be saved.

**11. Which statement is true regarding libraries in Windows 10?**

- Libraries allow Windows 10 to index files faster.
- Libraries allow Windows 10 to support file names longer than 20 characters.
- **Libraries allow Windows 10 to link multiple different directories.**
- Libraries allow Windows 10 to enforce the EFS file system.

**Explanation:** Libraries in Windows 10 allow multiple different directories to be linked together in one location.

**12. A user notes that the username and password are automatically populated in the Microsoft Edge browser when logging into a secure site. When the user tries to log into the same site using Google Chrome, the username and password do not save automatically. Why is this occurring?**

- Google Chrome does not support that secure site.
- The certificate for that site has not been authenticated.
- The Google Chrome browser is corrupt.
- **Google Chrome does not automatically save web credentials.**

**Explanation:** Web credentials do not save for sites accessed by browsers other than Internet Explorer and Edge. Credentials created with other browsers must be managed from within that browser.

**13. A user wishes to view an ISO disk image file on a Windows 10 Pro PC. How can this be done?**

- Use the built-in Unzip utility to open the ISO file and extract the contents into a directory.
- Convert a Dynamic disk to a Basic disk and open the ISO image.
- **Use File Explorer to locate the ISO file and mount the file using the Disk Image tools.**
- Copy the ISO image to a Dynamic disk and double click it.

**Explanation:** An ISO image can be mounted in Windows 10. Use File Explorer, to locate the ISO file, then select the Manage menu under Disk Image tools, and then select Mount.

**14. Which feature is included with both macOS and Apple iOS to establish a Wi-Fi direct connection between devices to simplify file transfer?**

- Nearby sharing
- Workgroup
- **AirDrop**
- Homegroup

**Explanation:** AirDrop was included in both macOS and Apple iOS to provide simple file sharing via a Wi-Fi direct connection between devices.

**15. A technician notices that a program that is listed in the registry of a Windows computer is not found on that computer. What is a possible solution to the problem?**

- Run fdisk /mbr from the command prompt.
- Restore the ntdetect.com file from the installation media.
- **Reinstall the application. Then, run the uninstall program.**
- Restore the boot.ini file from the installation media.

**Explanation:** By installing the application again, the link in the registry should work. When you uninstall the application, the uninstall process should remove the registry entries.

**16. A computer technician is attempting to modify settings in the Network Adapter > Properties > Advanced tab > Speed and Duplex. What is a possible effect (or impact) if this option is configured incorrectly?**

- The NIC loses VLAN support.
- The NIC cannot be set to shutdown while the computer is idle.
- **The network connection may experience issues.**
- The NIC cannot be set to wake up with network activity.

**Explanation:** Network card properties are configured in the Advanced tab of the adapter properties window. The Advanced tab provides configuration of features such as Speed & Duplex, QoS, Wake-on LAN, and more.

**17. A technician has successfully removed malware from a PC and finds that when the system is rebooted error messages are displayed about missing and corrupt system files. What utility can the technician use to replace or fix any corrupted system files?**

- ASR

- Fixmbr
- **SFC**
- Regedit
- Fixboot

**Explanation:** ASR is used to recover the operating system when it is totally corrupt and will not boot. Regedit is a registry editor whereas Fixmbr and Fixboot are command line utilities that can be used to repair corrupt boot records. SFC is used to check the integrity of any system files that may have been corrupted and repair them.

**18. What is the purpose of Windows 10 ReadyBoost?**

- **It enables Windows to treat an external flash device, such as a USB drive, as a hard drive cache.**
- It enables the quadruple channels on a 64-bit processor.
- It enables the UEFI bios to boot faster.
- It speeds up the Windows 10 start time.

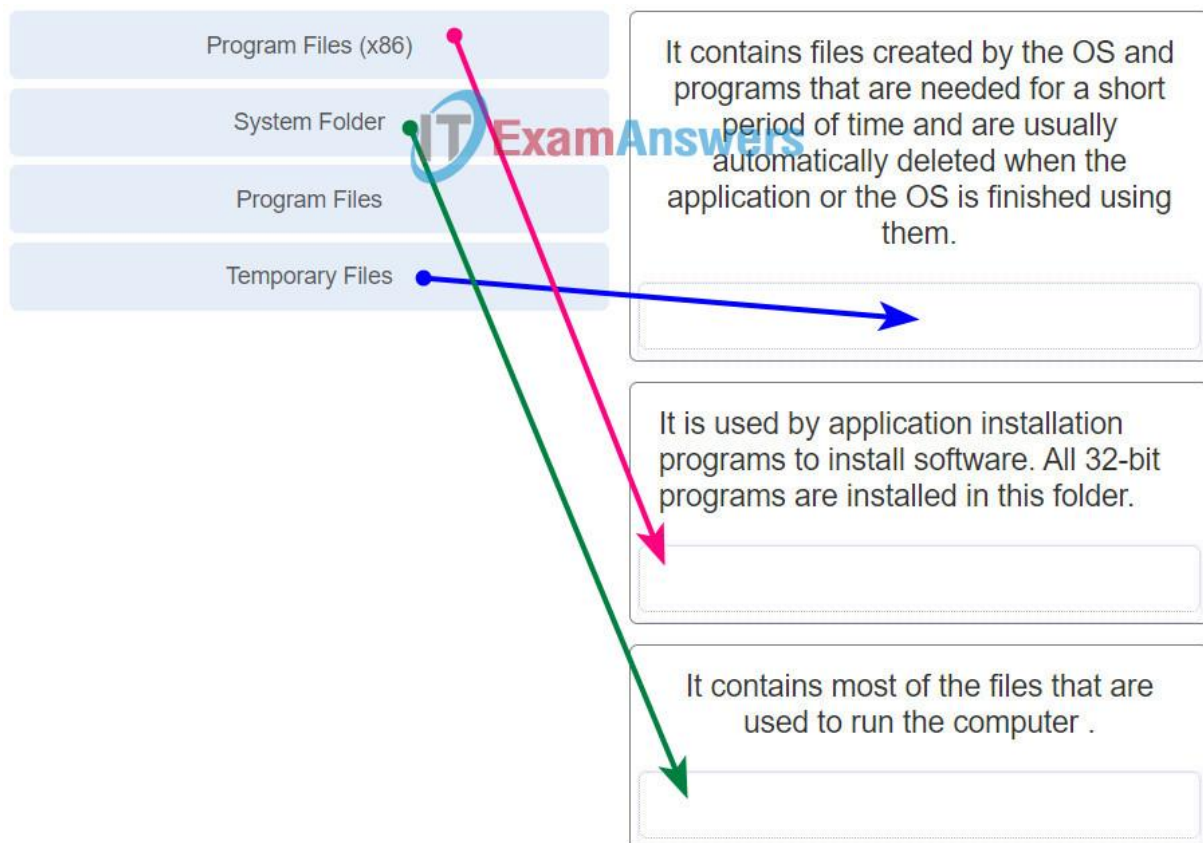
**Explanation:** Another form of virtual memory is using an external flash device and Windows ReadyBoost to enhance system performance. Windows 10 ReadyBoost enables Windows 10 to treat an external flash device, such as a USB drive, as a hard drive cache.

**19. Where are 32-bit program files located in a 64-bit version of Windows 10 Pro?**

- c:\Windows\system32
- c:\users
- c:\Program files
- **c:\Program files (x86)**

**Explanation:** In a Windows 10 64-bit operating system, 32-bit program files are located in the c:\programs (x86) folder, while 64-bit programs are located in the c:\Programs folder.

**20. Match the folders in a 64-bit Windows 10 PC to their description. (Not all options are used.)**



IT Essentials ( Version 8.0) – IT Essentials 8.0 Chapter 11 exam Q20

**21. A technician is troubleshooting a PC. The display shows an “Invalid Boot Disk” error after the POST. What is a probable cause?**

- The PC does not have a floppy drive or the floppy drive is broken.
- The date and time have been changed in the BIOS and do not reflect the correct time and date.
- A process is using most of the CPU resources.
- **The MBR is corrupted.**
- The PC has a BIOS password.

**Explanation:** Possible causes for the error shown are: (1) Media that does not have an operating system is in a drive. (2) The boot order is not set correctly in the BIOS. (3) The hard drive is not detected or the jumpers are not set correctly. (4) The hard drive does not have an operating system installed. (5) The MBR is corrupted. (6) The computer has a boot sector virus. (7) The hard drive is failing.

**22. A technician is troubleshooting a Windows 10 PC with a frozen Internet Explorer window. Which command can the technician run, as an administrator at a command prompt, to terminate the Internet Explorer process that has hung?**

- taskkill /pid iexplorer.exe
- taskkill /f /im explorer.exe
- taskkill /fi iexplorer.exe
- **taskkill /f /im iexplorer.exe**

**Explanation:** The taskkill command can be used to end processes and services. The switch /im refers to the ImageName to end a task by PID or image name respectively. The switch /f terminates the process without any user notification. This is useful because it will terminate the hung process even if it is displaying a dialogue box.

**23. Match the folders in a 32-bit Windows 10 PC to their description. (Not all options are used.)**

Program Files (x86)	<p>It contains files created by the OS and programs that are needed for a short period of time and are usually automatically deleted when the application or the OS is finished using them.</p> <p>✓ Temporary Files</p>
System Folder	
Program Files	
Temporary Files	
	<p>It is used by application installation programs to install software. All 32-bit programs are installed in this folder.</p> <p>✓ Program Files (x86)</p>
	<p>It contains most of the files that are used to run the computer .</p> <p>✓ System Folder</p>

**24. A user reports that a PC is losing files, not opening some files, and is performing slowly. The technician suspects problems with the hard drive. What should be done to protect the data that is on the PC and to determine the source of the problem, without risking total drive failure?**

- Run the format command, then replace the hard drive.
- **Back up all important files, then run chkdsk.**
- Run chkdsk, then run format.
- Back up all important files, then replace the hard drive.
- Run chkdsk, then back up all important files.

**Explanation:** Backing up important files is the first step in protecting existing data. After backing up, running chkdsk will allow the technician to determine if there are bad sectors on the hard drive, without losing any data.

25. Match the message types in the Windows 10 Event Viewer with their description. (Not all options are used.)

Message Type	Description
Information	A successful event is logged.
Warning	Immediate attention is required.
Error	A security event has been successful
Critical	A problem exists, but no immediate action is required.
Success Audit	There is an indication of a potential problem with a software component that is not functioning ideally.
Failure Audit	

26. A technician has been asked to reinstall the OS on a computer that has a corrupted operating system. The technician inserts the installation media in the optical drive. What would be the most likely action the technician should perform next?

- Change the BIOS password.
- Flash the BIOS for a firmware upgrade.
- Change clock speeds in the BIOS.
- **Change the boot sequence in the BIOS.**

**Explanation:** Typically, once the operating system has been installed, the computer boots from the hard disk all the time. To boot from an optical drive, the boot sequence needs to be modified. Changing the BIOS password,



flashing the BIOS, and changing the clock speed have no effect on loading installation files from the optical drive.

**27. A technician is troubleshooting a Windows 7 laptop that takes significantly longer than expected when performing a file search. What is the possible cause?**

- The file system is corrupt.
- The disk type is basic.
- The disk type is dynamic.
- The file permissions are not set.
- **The index service is not running.**

**Explanation:** The Windows indexing service is used to speed up file searches. A slow search may be the result of either the index service not running or not indexing the correct location.

**28. A user is looking for a file but can not find it in the Document folder. The user wants to move to the Download directory to check there. What is the best Windows command to select to do the job?**

- bootrec
- ipconfig
- diskpart
- **cd**
- help

**29. A user needs to display a list of current processes running on a local or a remote computer. What is the best Windows command to select to do the job?**

- diskpart
- bootrec
- format
- **tasklist**
- path

**30. A Windows 8 computer locks up with a stop error during startup and then automatically reboots. The automatic restart setting is making it difficult to see any error messages. What can be done so that the error messages can be viewed?**

- **Access the Advanced Startup options menu before the OS loads to disable the auto restart function.**
- Use the System Recovery options to restart the operating system.
- Use the Command Prompt option to research the stop error messages.
- View the error messages and recover the system using the System Image Recovery tool.

**Explanation:** The error messages are difficult to read so the best solution is to first try to disable the auto restart function by accessing the Advanced Startup menu before the OS loads. Then the error messages can be read and further action taken to resolve the rebooting problem.



**31. A technician is working on a Windows 10 PC that keeps freezing occasionally after a driver update. System restore has been turned off. What option can be used to address this issue without loss of data or applications?**

- Uninstall and reinstall the device using device manager.
- Restore using Sysprep.
- **Reset this PC.**
- Restart the Windows Update services.

**32. A company has recently deployed Active Directory and now a workstation cannot connect to a network resource. A technician takes corrective action by modifying group policy settings. Which command should the technician use to make the workstation synchronize with the new settings?**

- runas
- **gpupdate**
- rstrui
- tasklist
- gpresult

**Explanation:** The functions of the listed commands are as follows:

- **runas** – runs a program or tool with different permissions
- **rstrui** – starts the System Restore utility
- **gpresult** – displays group policy settings
- **gpupdate** – refreshes group policy settings
- **tasklist** – displays currently running applications

**33. A technician wishes to create a dynamic volume on a Windows 10 PC that has two physical hard drives. The technician wants to achieve maximum write performance with data fault tolerance. What type of dynamic volume should be created to achieve this?**

- RAID 5 volume
- RAID 2 volume
- RAID 6 volume
- **RAID 1 volume**

**Explanation:** Mirroring is a type of RAID (RAID 1) that uses two hard disks to protect a single disk against failure. Because data is written to both disks, it can be read from both disks, thus improving the read speed performance.

**34. Which file sharing mechanism is included with Microsoft Windows 10 to provide simple file sharing via Wi-Fi and Bluetooth?**

- **Nearby Sharing**
- AirDrop
- Homegroup
- NFC
- Workgroup

**Explanation:** Nearby Sharing is included in Microsoft Windows 10 to provide simple file sharing with the ability to share content with a nearby device using both Wi-Fi and Bluetooth.

35. A company is implementing a wireless network and using wireless devices as part of the corporate environment. Which two server-based authentication methods should the company consider in the wireless network design? (Choose two.)

- AES
- **RADIUS**
- TKIP
- **TACACS**
- WPA2-PSK

**Explanation:** RADIUS and TACACS require a server that would authenticate wired/wireless devices as well as users.

36. A Windows 10 computer suddenly started experiencing network connectivity issues after the latest Windows updates completed a week ago. What option can be used to address this issue without loss of data or applications?

- Restore using Sysprep.
- Restart the Windows Update services.
- **Reset this PC.**
- Uninstall and reinstall the device using device manager.

37. A client installed a new driver for a device three weeks ago; however, this driver is causing the system to freeze occasionally and the client wishes to revert back to the old driver. What option can be used to address this issue without loss of data or applications?

- Restart the Windows Update services.
- Restore using Sysprep.
- Uninstall and reinstall the device using device manager.
- **Reset this PC.**

38. A technician is troubleshooting a Windows 10 PC that will not do any windows updates automatically or manually. What option can be used to address this issue without loss of data or applications?

- Use Advanced Start-up.
- Go back to the initial Windows build.
- **Delete all the files in C:\Windows\SoftwareDistribution folder and restart the PC.**
- Perform a repair of Windows using Installation media.

39. A user is trying to create a new Windows directory for storing files related to a new project. What is the best Windows command to select to do the job?

- **md**
- ping
- tracert
- nslookup
- help

40. A user has to shutdown several remote computers one at a time. What is the best Windows command to select to do the job?

- nslookup
- ping
- **shutdown**
- netstat
- recover

**41. A user has just installed a new hard drive into the PC and needs to prepare it to store Windows files. What is the best Windows command to select to do the job?**

- bootrec
- ipconfig
- diskpart
- net user
- **format**

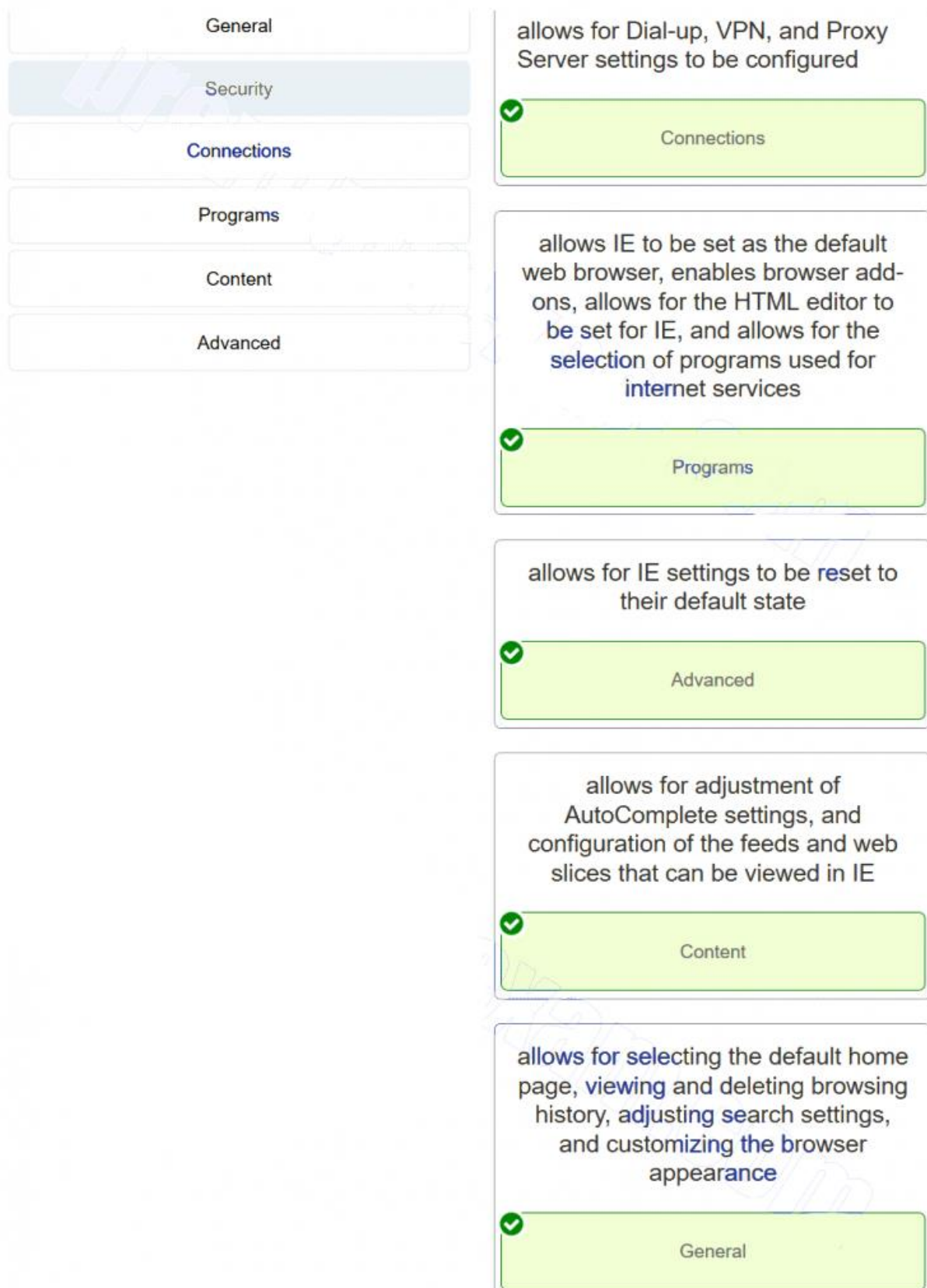
**42. A technician is troubleshooting a Windows 10 PC that will not do any windows updates automatically or manually. What option can be used to address this issue without loss of data or applications?**

- Restore using Sysprep.
- Uninstall and reinstall the device using device manager.
- Restart the Windows Update services.
- **Delete all the files in C:\Windows\SoftwareDistribution folder and restart the PC.**

**43. A user is experiencing issues with system startup and with failing to open some files. The user wants to determine the source of any hard drive issues. What is the best Windows command to select to do the job?**

- bootrec
- ipconfig
- **chkdsk**
- diskpart
- cls

**44. Match the Internet Options to the descriptions used to configure Microsoft Internet Explorer. (Not all options are used.)**



45. A user suspects someone has hacked into the PC and wants to verify activity on the PC by displaying all active TCP connections to the PC. What is the best Windows command to select to do the job?

- diskpart

- bootrec
- **netstat**
- format
- regsrv32

46. A user has an important file that is used in many projects and needs to move that file to a different Windows directory while maintaining it in the current location. What is the best Windows command to select to do the job?

- bootrec
- ipconfig
- diskpart
- history
- **copy**

47. A user is reorganizing files within different directories to accommodate new projects and needs to relocate a file from one Windows directory to another one. What is the best Windows command to select to do the job?

- tasklist
- DISM
- **move**
- sfc
- history

## IT Essentials (Version 8.0) – ITE 8.0 Certification Checkpoint Exam Chapters 10 – 11 Answers

1. A user needs to display a list of current processes running on a local or a remote computer. What is the best Windows command to select to do the job?

- path
- shutdown
- **tasklist**
- DISM
- sfc

2. A technician is troubleshooting a computer that has two monitors attached. The technician wants to disable one of them to see if that changes the symptoms exhibited. Which Windows tool would the technician use to disable the monitor?

- BIOS
- Task Manager
- **Device Manager**
- Resource Monitor

**Explanation:** An installed device can be disabled through Device Manager. To disable a device in Device Manager, expand the particular category, such as Monitors, right-click on the monitor, select the Disable Device option.

3. A user in a corporate environment is reporting that a Windows computer used by part-time employees is running slowly after a Windows update. Which two actions should a technician take to help in this situation? (Choose two.)

- Repartition the hard drive into smaller partitions.
- **Disable unneeded processes.**
- **Run Disk Cleanup.**
- Use the mstsc command.
- Use the System File Checker tool.

**Explanation:** The Windows Disk Cleanup tool searches for files that might not be used or needed, such as .tmp files, that would free up drive space. Disabling unneeded processes closes applications and processes that are not currently being used, thus freeing up hard drive space and memory for faster performance.

4. A technician wishes to view all the processes that are running for the active user on a Windows 10 PC. What option must be selected on the Windows Task Manager in order to do this?

- **Show processes under the User tab.**
- Select the Performance tab.
- Select the Startup tab.
- Select the Services tab.

**Explanation:** The Users tab in the task manager can be used to see all the processes that are running under the current active user.

5. A technician changes the length of the local user password to five characters using the Local Security Policy snap-in. The technician tries to create a password of “dave” for the local user account of “dave” but it fails because of the Windows 10 password complexity requirements. Which password would meet the requirements?

- dave\$
- Dave\$
- **D@ve4**
- Dave4

**Explanation:** Password complexity rules would dictate that the password must not use the username within the password, and must have a combination of six upper/lower case alpha-numeric and non-alpha-numeric characters.

6. A user is trying to install a new application on a Windows 10 PC but the application fails to install fully. The user tries to uninstall the application but fails to uninstall it. What can the user do to remove the application from the PC without affecting existing applications and data?

- Restore from a Windows image file.
- Use the Reset this PC option.
- Roll back the last driver installed.
- **Restore using a System Restore point.**

**Explanation:** System Restore is used to reset the system configuration to an earlier point in time and can be used to reverse changes made when installing an application or device driver.

**7. The IT department has just purchased 15 wireless access points in order to provide full wireless coverage for all 100 employees within the company and is looking to deploy the most secure and scalable wireless implementation. Which open source authentication method would perform authentication on behalf of all 15 wireless network devices?**

- WPA2-PSK
- TKIP
- **RADIUS**
- TACACS+

**Explanation:** RADIUS and TACACS+ both use a separate server that performs authentication on behalf of network devices. However, RADIUS is an open standard and provides greater compatibility.

**8. A user is trying to share a printer attached to a Windows 10 PC but is unable to do so. What account should be used to do that?**

- system
- network service
- local service
- **administrator**

**Explanation:** The administrator account must be used to share a local printer on a network.

**9. A technician uses Microsoft Deployment Image Servicing and Management (DISM) tool to create a Windows image file on one of the workstations running Windows 10. When the technician tries to clone another workstation with the image file, the workstation exhibits network connectivity issues on completion. What could cause this?**

- The Sysprep utility should have been turned off prior to the creation of the image file.
- The network drivers were not added to the image file.
- The technician used the wrong tool to create the image file.
- **The SID of the original PC is not cleared when creating the image with DISM.**

**Explanation:** The technician must use Sysprep to clean up the local specific configuration, such as the SID, otherwise the cloned systems will not work properly.

**10. A technician is troubleshooting a Windows 10 PC with a frozen Internet Explorer window. Which command can the technician run, as an administrator at a command prompt, to terminate the Internet Explorer process that has hung?**

- **taskkill /f /im iexplorer.exe**
- taskkill /f /im explorer.exe
- taskkill /fi iexplorer.exe



- taskkill /pid iexplorer.exe

**Explanation:** The taskkill command can be used to end processes and services. The switch /im refers to the ImageName to end a task by PID or image name respectively. The switch /f terminates the process without any user notification. This is useful because it will terminate the hung process even if it is displaying a dialogue box.

**11. A technician is troubleshooting a Windows 10 PC that is taking a long time to start up. The technician needs to identify which user applications are causing the greatest delay in the startup of the PC. Which tool should the technician use?**

- **Task Manager**
- Resource Monitor
- System Configuration
- Performance Monitor

**Explanation:** The **Startup** tab in the **Task Manager** can be used to examine which processes are loaded at startup and can be used to identify the application causing the startup delay.

**12. A technician calls the help desk with the following situation. "I am trying to save a file to my RAID drive but my system cannot find it." What advice should the help desk agent give to the caller?**

- Use Task Manager to release system resources from the unresponsive application.
- **Check the RAID controller, because it may need to be replaced.**
- Use Device Manager to look for any driver issues or problems.
- Check the IP address configuration on the new PC, because the default gateway may be incorrect.

**13. A user wishes to upgrade a PC to Windows 10 from a PC that is running a 32-bit version of Windows 7. Which two editions of Windows 10 will support this upgrade? (Choose two).**

- **32-bit Windows Home**
- **32-bit version of Windows 10 Pro**
- 64-bit version of Windows Home
- 64-bit version of Windows 10 Pro
- 64-bit version of Windows 10 Enterprise

**Explanation:**

- A direct upgrade from a 32-bit version of Windows 7 to a 64-bit version of Windows 10 is not supported. To move to a 64-bit version, a clean installation is required.
- The upgrade path from Windows 7 supports both the Home and Pro editions of Windows 10, but only in the same architecture (32-bit to 32-bit)

**14. A manager calls the help desk with the following situation. "What can be done to improve the printing performance of the departmental laser printer?" What advice should the help desk agent give to the caller?**

- Use Task Manager to release system resources from the unresponsive application.
- Use Device Manager to look for any driver issues or problems.
- Check the RAID controller, because it may need to be replaced.
- **Upgrade the RAM in the printer.**

**15. A technician wishes to prepare the computers in the network for disaster recovery. The network consists of a variety of desktops and laptops from different vendors. All the computers are running either a 32-bit version of Windows 10 Pro or a 64-bit version of Windows 10 Pro. How would the technician prepare the recovery media?**

- Prepare one 64-bit recovery disc for all the computers.
- Prepare one 32-bit recovery disc for all the computers.
- **Prepare individual recovery discs for all the computers.**
- Prepare one image restore for all the computers.

**Explanation:** All the PCs are from different vendors and thus have dissimilar hardware configurations. Furthermore, all the PCs have a variety of 32-bit Windows 10 and 64-bit Windows 10. Because the PCs have different versions of the OS and dissimilar hardware, you cannot use the same image on all the PCs. In order to use a single image, Sysprep must be used to strip out machine specific information like the SID, and all PCs must have the same hardware configuration and the same version of the Windows operating system.

**16. A user wants to copy a group of files from one Windows directory to another. What is the best Windows command to select to do the job?**

- md
- rd
- del
- **robocopy**
- net use

**17. An administrator calls the help desk with the following situation. "I need to make changes to a file. I can open it but I am unable to make changes." What advice should the help desk agent give to the caller?**

- Set the file permissions to read and execute.
- Create a virtual machine with an OS that supports the application.
- If using Windows, set the idle timeout and screen lock.
- **Check the permissions for this file.**

**18. A manager calls the help desk with the following situation. "I need to be able to view and download files but not delete them." What advice should the help desk agent give to the caller?**

- **Set the file permissions to read and execute.**
- Create a virtual machine with an OS that supports the application.
- Check the permissions for this file.
- If using Windows, set the idle timeout and screen lock.

**19. A user has been told by the systems administrator that the group policy settings for user workstations are modified. The user has been asked to**

synchronize the workstation with the new settings. What is the best Windows command to select to do the job?

- rd
- del
- **gpupdate**
- move
- cls

20. A manager calls the help desk with the following situation. “Many employees leave their desks for extended periods of time with their PCs still logged in and unlocked.” What advice should the help desk agent give to the caller?

- Create a virtual machine with an OS that supports the application.
- Check the permissions for this file.
- **If using Windows, set the idle timeout and screen lock.**
- Set the file permissions to read and execute.

21. A user of a Windows 10 PC wants to automatically sync the user profile across various Windows 10 devices that the user owns. How can the user accomplish this?

- **Have the user sign into all devices with the Microsoft account of the user.**
- Ensure that the user is in the proper group so that the group policy will be applied.
- Use gpupdate to propagate the group policy to other devices.
- Make sure that OneDrive file sync is disabled.

**Explanation:** A Microsoft account is required to sync data between devices, to access OneDrive, and to work with parental controls of the Child account. It allows access to Microsoft cloud services and syncs desktop settings and profiles across multiple devices. For this to occur, all devices must be signed in with the same Microsoft account.

22. An IT support person calls the help desk with the following situation. “I need to add a new printer but I can’t see it on the list of available printers.” What advice should the help desk agent give to the caller?

- Use Task Manager to release system resources from the unresponsive application.
- Use Device Manager to look for any driver issues or problems.
- Check the RAID controller, because it may need to be replaced.
- **Enter the IP address or browse for it on the network.**

23. A user wants to end one or more processes on a PC based on process ID or image name. What is the best Windows command to select to do the job?

- md
- rd
- del
- **taskkill**
- exit

24. An IT support person calls the help desk with the following situation. "I added a new PC to my LAN. I can ping other devices on my LAN but not any remote devices." What advice should the help desk agent give to the caller?

- Use Task Manager to release system resources from the unresponsive application.
- Use Device Manager to look for any driver issues or problems.
- **Check the IP address configuration on the new PC, because the default gateway may be incorrect.**
- Check the RAID controller, because it may need to be replaced.

25. A user sees an unfamiliar IP address in the web server log file and wants to verify the organization that owns the IP address. What is the best Windows command to select to do the job?

- DISM
- sfc
- tasklist
- regsrv32
- **nslookup**

26. A user notices errors for some Windows operations and suspects that some system files might be corrupted. The user wants to scan and verify the integrity of all system files and replace corrupted files with correct versions. What is the best Windows command to select to do the job?

- DISM
- shutdown
- **sfc**
- tasklist
- path

27. A user needs to manage the drives, disks, partitions, volumes, and virtual drives of a PC. What is the best Windows command to select to do the job?

- md
- rd
- del
- **diskpart**
- net user

28. An administrator calls the help desk with the following situation. "I need to use an application that is not supported by Windows on my PC." What advice should the help desk agent give to the caller?

A manager calls the help desk with the following situation. "I need to use an application that is not supported by Windows on my PC." What advice should the help desk agent give to the caller?

- **Create a virtual machine with an OS that supports the application.**
- Set the file permissions to read and execute.
- Check the permissions for this file.
- If using Windows, set the idle timeout and screen lock.

29. A user is trying to create a new Windows directory for storing files related to a new project. What is the best Windows command to select to do the job?

- **md**
- rd
- del
- move
- help

30. A user has deleted all the files from a directory and wants to remove the empty directory. What is the best Windows command to select to do the job?

- DISM
- **rd**
- sfc
- tasklist
- history

31. An IT support person calls the help desk with the following situation. “What can be done to improve the printing performance of the departmental laser printer?” What advice should the help desk agent give to the caller?

- **Upgrade the RAM in the printer.**
- Use Task Manager to release system resources from the unresponsive application.
- Use Device Manager to look for any driver issues or problems.
- Check the RAID controller, because it may need to be replaced.

## IT Essentials (Version 8.0) Chapter 12 Exam Answers ITE v8.0

1. An instructor is discussing facts about different mobile device operating software. The instructor states: “When the device roams out of the range of any Wi-Fi networks, it can connect to the cellular data network if this feature is enabled.” To which OS does this relate: iOS, Android, or both?

- iOS
- Android
- **both**

2. An administrator is re-imaging a large number of Mac OS X machines. What built-in tool or command can be used to remotely boot the computers?

- mstsc
- Finder
- **Netboot**
- Time Machine

**Explanation:** Netboot is a built-in tool on the Mac OS that allows for remotely booting the computers. Finder is similar to the Windows File Explorer tool and is used to navigate the Mac OS file system. MSTSC is used to open the Windows Remote Desktop utility. Time Machine is an automatic backup utility built into the Mac OS.

**3. Which Linux file system introduced the journaled file system, which can be used to minimize the risk of file system corruption in the event of a sudden power loss?**

- ext2
- NFS
- CDFS
- **ext3**

**Explanation:** The ext3 file system is considered a journaled file system that was designed to improve the existing ext2 file system. A journal, the main feature added to ext3, is a technique used to minimize the risk of file system corruption in the event of sudden power loss.

**4. A file called new\_resume has the following file permissions: `rw-r-x--x`. What two facts can be determined from these permissions? (Choose two.)**

- Group members are able to modify the file.
- The user has full access to the file.
- **The user is able to read and modify the file.**
- **Members of the group have read and execute access to the file.**
- Other people have no access to the file.
- Other people have read and execute access to the file.

**Explanation:** Read, write, and execute permissions are assigned to each file. The permissions are listed in groups of three. The first group of three permissions references users, the second references group members, and the third references others. The first position of each of the three permissions is the R or read permission, the second is the W or write permission, and the third is the X or execute permission. If any position has a dash, the associated group does not have permission for that category. In this case, the user has read and write access (rw-). Group members have read and execute access (r-x). Other people have execute only access (-x).

**5. What is the most commonly used method to close an application that appears to be frozen on an OS X-based computer?**

- **Use Force Quit.**
- Access the Status menu.
- Use Task Manager.
- Access the Notification Center.

**Explanation:** To use Force Quit, right-click on the application icon that is not responding from the Dock and close the application.

**6. What is the result of doing a factory reset on a mobile device?**

- A complete backup of the device is done and all viruses and malware are removed.

- The operating system will be updated with the most recent updates and patches.
- **All user data and settings will be deleted.**
- The operating system will be deleted and all user data is transferred to the Cloud.

**Explanation:** After a factor reset, a mobile device is left in the same state that it was when it left the factory. The operating system software would not be altered but all user data, settings, and third party applications would be deleted. Backups should be done prior to a factory reset. Updates or patches to the operating system could be done before or after the factory reset.

**7. Android apps run primarily based on privileges enabled by the user. Sometimes an Android app requires extra privileges to access system components. How do Android apps run to accomplish both situations?**

- Android apps run through a proxy service.
- Android apps run in a walled garden.
- Android apps run in a guest mode.
- **Android apps run in a sandbox.**

**Explanation:** Android apps run in a sandbox and have only the privileges enabled by the user. If an app needs to obtain permissions, a prompt will appear and the user can grant permissions through settings.

**8. A Linux administrator wants to backup current files in a data directory and store them in a new directory on another disk. Which two commands would be needed? (Choose two.)**

- cd
- **mkdir**
- mv
- rm
- **cp**

**Explanation:** The mkdir command is used to create the new directory and the cp command is used to copy files from one directory to another.

**9. What represents apps in the Windows Phone interface?**

- widgets
- buttons
- **tiles**
- icons

**Explanation:** The Windows Phone OS uses tiles to represent apps. Tiles are rectangles that can display active content. When tapped, they open the associated app. Tiles can be resized to unclutter screens and to reflect the relative importance of the app.

**10. A Linux PC user notices that the PC freezes on startup and exhibits kernel panic where there is a stop screen. What is a possible cause for the issue?**

- **A driver has become corrupted.**
- Deja Dup has been turned off in the system.



- LILO has been deleted.
- GRUB has been corrupted.

**Explanation:** When a driver in a Linux system has been corrupted or a piece of hardware is failing, the system will freeze on startup and exhibits kernel panic where there is a stop screen.

**11. Which cloud-based storage service does Microsoft provide for backups?**

- Dropbox
- Google Sync
- **OneDrive**
- iCloud

**Explanation:** Data on mobile devices must be backed up periodically to ensure that it can be recovered if needed. Most mobile operating systems come with a user account linked to the cloud services of the vendor, such as iCloud for iOS, Google Sync for Android, and OneDrive for Microsoft.

**12. What is a good source for safely downloading Android apps?**

- the Apple App Store
- freeware sites
- iTunes
- **Google Play**

**Explanation:** Google Play ensures that the app is compatible with the mobile device and is a trusted source for apps.

**13. What tool or command is used in the Mac OS X to navigate the file system?**

- mstsc
- **Finder**
- Task Manager
- File Explorer

**Explanation:** Finder is similar to the Windows File Explorer tool and is used to navigate the Mac OS file system. The mstsc command is used to open the Windows Remote Desktop utility. The Task Manager tool on Windows allows a user to view all running applications.

**14. Which statement describes the iOS app icons on a mobile device screen?**

- Each icon is a shortcut of the app.
- **Each icon represents the actual app.**
- Each icon links to multiple instances of the actual app.
- Each icon represents an instance of the actual app.

**Explanation:** On the iOS interface, each app on screen is the actual app, not a shortcut.

**15. What is a purpose of the boot manager program?**

- It checks the validity of hardware and software on the device after a factory reset.
- **It allows the user to select the OS to use to boot the device.**

- It allows the user to determine which apps are automatically opened during the boot process.
- It automates the POST and checks the disk for bad sectors during a boot.
- It manages antivirus signature files, encryption keys, and certificates when a device boots.

**Explanation:** Many devices have multiple operating systems installed in different partitions. When a device boots, the boot manager asks the user to select the OS to use. The boot manager then directs the BIOS to the correct partition so that the device can continue to boot by using the selected OS.

#### 16. What is Wi-Fi calling?

- a convenient way to securely and digitally make payments with mobile devices
- a government emergency alert service for smartphones
- a method for sharing data between two mobile devices
- **a way to make mobile phone calls over a wireless data network**
- a method used to push apps to smartphones

**Explanation:** Wi-Fi calling is a way that a mobile phone can use a wireless data network to make phone calls as if it were connected to a cellular network. In cases where cell phone coverage is inadequate, calls can be placed from places that have open Wi-Fi networks.

#### 17. What command is used to open a text editor in a Linux system?

- ifconfig
- ls
- grep
- **vim**

**Explanation:** The vim command is used to open a text editor; ls displays files within a directory; grep searches for strings of characters within a file; and ifconfig displays information about the network interface card.

#### 18. What are two purposes of the passcode lock feature on mobile devices? (Choose two.)

- to erase all personal data from the device
- to remotely lock the device if it is stolen
- **to prevent unauthorized use of the device**
- **to help prevent theft of private information**
- to restore and re-synchronize the device
- to return the device to the default factory state

**Explanation:** The passcode lock feature on mobile devices helps prevent theft of private information and places the device into a power saving state. Personal data will not usually be erased from some mobile devices unless the number of failed passcode login attempts exceeds a threshold. Remote lock allows the device to be locked from a remote location. A factory reset returns the device to the original operation state when the device was first purchased. Various applications such as email or cloud storage can provide synchronization capabilities to be able to restore and re-synchronize

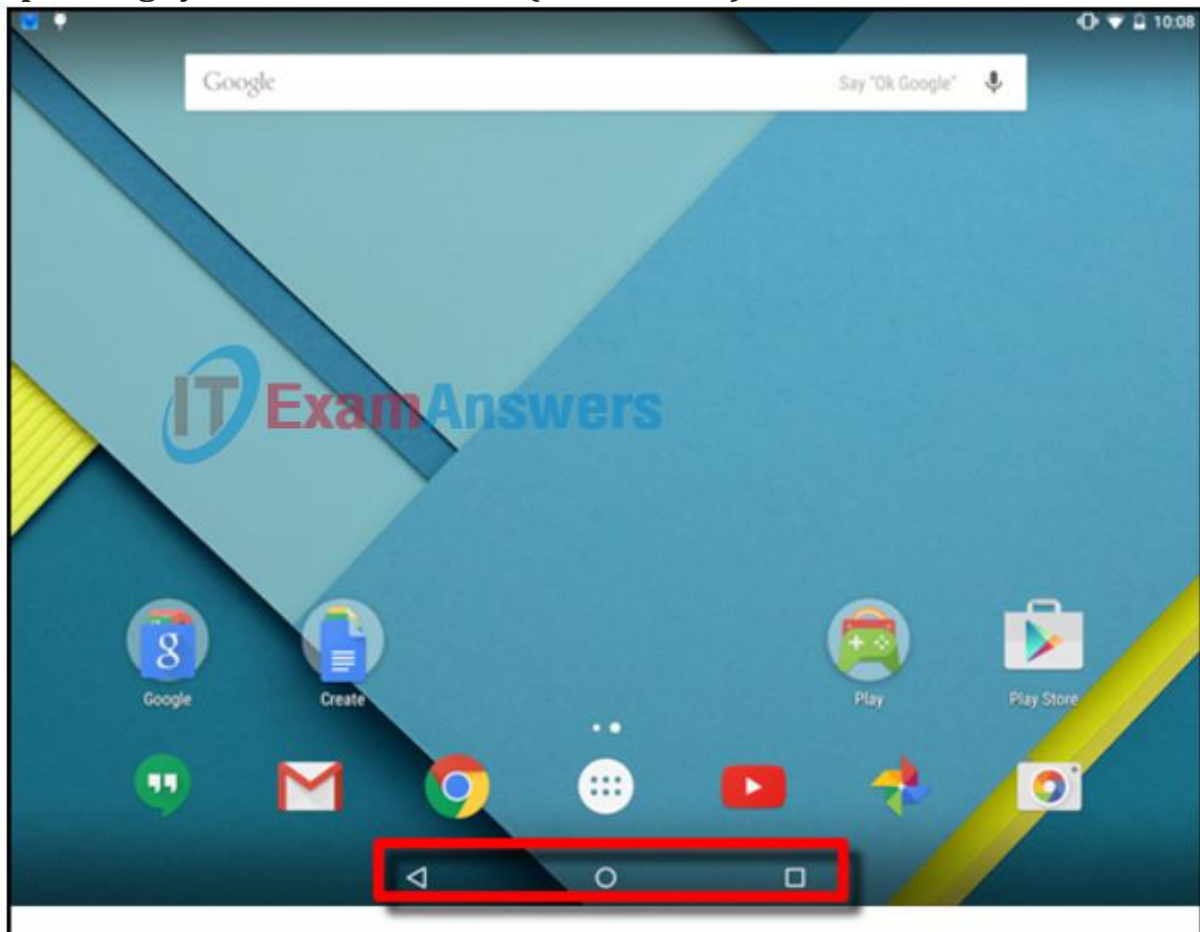
information such as user data, contacts, and email on a mobile device. y other device features and actions.

**19. Which two location data sources can locator apps use to determine the position of a mobile device? (Choose two.)**

- **cellular towers**
- the sandbox
- remote lock
- an app source
- **WiFi hotspots**

**Explanation:** In addition to GPS, mobile device locator apps can use cellular towers and WiFi hotspots to determine the position of a mobile device. The device sandbox, remote lock, or an app source (Play Store or iTunes) are other features and functions related to security and app downloading.

**20. Refer to the exhibit. What two statements are true about the mobile operating system screen shown? (Choose two.)**



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- **The area enclosed by the red rectangle contains navigation icons.**
- This is an iOS screen.
- **This is an Android screen.**
- The area that is highlighted displays background processes and indicators.

- This is a Windows Phone screen.

**Explanation:** The highlighted area shows the Android operating system navigation icons. From left to right they are Back, Home, and Recent Apps.

**21. Which model does Apple use to provide iOS apps to customers?**

- **walled garden**
- Xcode
- iCloud
- sandbox

**Explanation:** Apple uses a walled garden model for the iOS apps. The apps must be submitted to and approved by Apple before they are released to users.

**22. What is the purpose of using the auto-brightness feature on a mobile device with an LCD screen?**

- **to conserve battery power**
- to prevent the burn-in effect on the screen
- to display text messages with better contrast
- to reduce the interference from sunlight

**Explanation:** The LCD screen for most mobile devices uses the most battery power. Lowering the brightness or using the auto-brightness feature helps conserve battery power.

**23. An instructor is discussing facts about different mobile device operating software. The instructor states: "This OS uses the system bar, displayed at the bottom of every screen, to navigate apps and screens." To which OS does this relate: iOS, Android, or both?**

- iOS
- **Android**
- both

**24. Which two methods are commonly used to remove the default restrictions and protections added to mobile operating systems? (Choose two.)**

- **rooting**
- rootkit execution
- device update
- **jailbreaking**
- system backup

**Explanation:** Mobile operating systems are usually protected by a number of software restrictions. Rooting and jailbreaking are two methods for removing restrictions and protections added to mobile operating systems. They are a means of circumventing the usual operation of the device operating system to gain superuser or root administrator permissions.

**25. An instructor is discussing facts about different mobile device operating software. The instructor states: "GPS signals are used to enable geocaching, geotagging and device tracking on these mobile devices." To which OS does this relate: iOS, Android, or both?**

- iOS
- Android
- **both**

**26. Which file system is the primary file system used by Apple in current Macintosh computers?**

- ext2
- ext3
- **APFS**
- CDFS
- HFS+

**Explanation:** To use Force Quit, right-click on the application icon that is not responding from the Dock and close the application.

**27. An instructor is discussing facts about different mobile device operating software. The instructor states: “Remote backups are a cloud-enabled service for mobile devices.” To which OS does this relate: iOS, Android, or both?**

- iOS
- Android
- **both**

**28. What is the purpose of signature files used to secure mobile devices and operating systems?**

- They contain a record of historical and pending firmware and software updates.
- They contain a list of all user passwords.
- **They contain sample code from known viruses and malware that is used by security software to identify malicious software.**
- They contain a log of digital certificates and encryption keys associated with the user.

**Explanation:** Antivirus and antimalware software compare the contents of a disk with sample virus and malware code included in signature files. If a comparison is found, the user can be notified and the virus can be isolated or removed.

**29. Which navigation icon on the system bar of an Android device is used to return to the previous screen?**

- **Back**
- Home
- Menu
- Recent Apps

**Explanation:** The **Back** icon, if pressed, returns to the previous screen.

**30. Which statement describes the Touch ID in iOS devices?**

- It is used as the passcode.
- It is the encryption key set by the user.
- **It is the hash value of the user fingerprint.**
- It is used to set the touch screen sensitivity.

**Explanation:** Apple uses a technology known as Touch ID in which the user sets up a template fingerprint scan that is converted into a unique hash and stored within a secure cache on the iOS device. The hash is used to authenticate with the user.

**31. An instructor is discussing facts about different mobile device operating software. The instructor states: “To synchronize a mobile device to a PC, iTunes must be installed on the PC.” To which OS does this relate: iOS, Android, or both?**

- **iOS**
- Android
- both

**32. A mobile device user notices that the system update includes an update of the Primary Rate ISDN (PRI). What is the function of the PRI?**

- It is the configuration of radio frequencies used on the device.
- **It is the configuration of the data rates between the device and the cell tower.**
- It is the data rate setting of the user account with the carrier service.
- It is the configuration information that the device needs to communicate on networks other than the carrier network.

**Explanation:** In addition to mobile operating system updates, there are two other types of updates for mobile device radio firmware. They are called baseband updates and consist of the Preferred Roaming List (PRL) and the Primary Rate ISDN (PRI). The PRL is configuration information that a cellular phone needs to communicate on networks other than the carrier network. The PRI configures the data rates between the device and the cell tower. This ensures that the device is able to communicate with the tower at the correct rate.

**33. An instructor is discussing facts about different mobile device operating software. The instructor states: “The mobile devices have a feature called Spotlight that is a search tool that provides information from many sources.” To which OS does this relate: iOS, Android, or both?**

- **iOS**
- Android
- both

**34. An instructor is discussing facts about different mobile device operating software. The instructor states: “The icon on the Home screen is a shortcut to the app.” To which OS does this relate: iOS, Android, or both?**

- **Android**
- iOS
- both

**35. What are two ways that iOS differs from Android? (Choose two.)**

- iOS uses an All Apps button whereas Android uses a Home button.
- **iOS has a physical Home button, but Android uses navigation icons.**



- **In iOS, the icon for an app represents the app itself. Deleting the icon in iOS deletes the app. In Android, the icon on the Home screen is a shortcut to the app.**
- In iOS, apps can only appear on screens, whereas in Android, apps can appear on screens and in folders.
- In iOS, folders are created by dragging one app on top of another app, but in Android folders must be created from the home screen menu.

**Explanation:** Apple iOS devices have a physical Home button that has many uses. One of the uses of the Home button is navigation between screens. Android uses navigation icons instead of a physical Home button. In addition, much like a Windows OS, apps in Android are represented by icons that are shortcuts to the actual app. In iOS, the icons are the apps. Deleting an icon in Android deletes only the shortcut. However, the entire app is deleted from an iOS device when its icon is deleted.

**36. An instructor is discussing facts about different mobile device operating software. The instructor states: "WIFI hotspots are a location data source that can be used by locator apps to determine the position of a mobile device." To which OS does this relate: iOS, Android, or both?**

- iOS
- Android
- **both**

**37. What is the name of the Windows Phone 8.1 digital, or virtual, assistant?**

- Bing
- Nova Launcher
- Spotlight
- **Cortana**

**Explanation:** Siri is the well-known digital, or virtual, assistant that is available in iOS. Windows Phone also has a digital assistant. It is called Cortana.

**38. An instructor is discussing facts about different mobile device operating software. The instructor states: "The start voice control function can be performed with the home button." To which OS does this relate: iOS, Android, or both?**

- Android
- **iOS**
- both

**39. An instructor is discussing facts about different mobile device operating software. The instructor states: "This OS can be used by programmers to operate devices like laptops, smart TVs, and e-book readers." To which OS does this relate: iOS, Android, or both?**

- iOS
- both
- **Android**



# IT Essentials (Version 8.0) Chapter 13 Exam Answers ITE v8.0

1. A high technology company has an issue with unauthorized people gaining access into the company by following an authorized employee through the secure entrance. Which two measures could help with this security breach? (Choose two.)

- **mantrap**
- multifactor authentication
- biometrics
- **security guard that checks IDs**
- employee smart ID

**Explanation:** A guard checking IDs or a mantrap can help prevent someone following a legitimate employee into a restricted area. With biometrics, employee smart IDs, or multifactor authentication being used, once the door is accessed by someone having the correct credentials, unauthorized people could still trail the legitimate person into the building or area.

2. A user calls the help desk reporting that a laptop is not performing as expected. Upon checking the laptop, a technician notices that some system files have been renamed and file permissions have changed. What could cause these problems?

- The display driver is corrupted.
- The file system is corrupted.
- The file system has been encrypted.
- **The laptop is infected by a virus.**

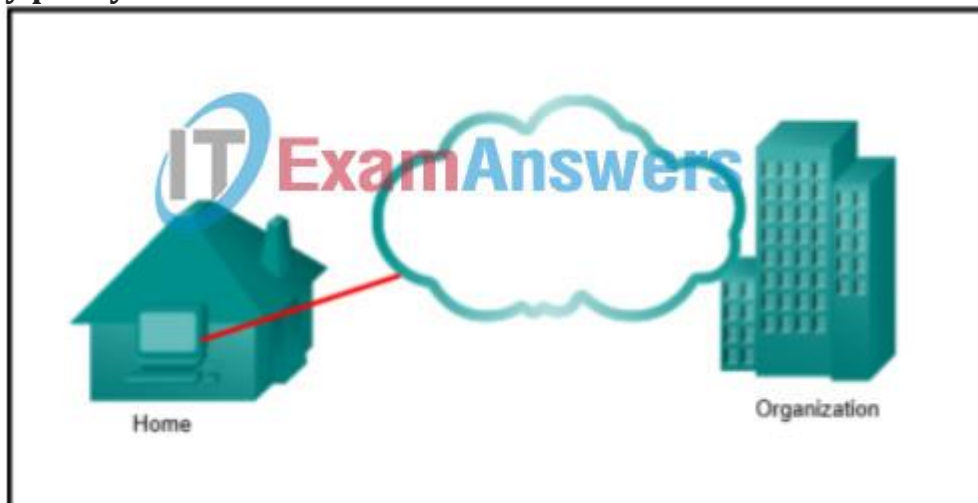
**Explanation:** Problems of system files being renamed and file permissions being changed without user knowledge are most likely caused by a virus. File system corruption would make the directory and files inaccessible. A corrupted display driver would prevent the laptop from displaying at all or it would display only VGA resolution.

3. A user receives a phone call from a person who claims to represent IT services and then asks that user for confirmation of username and password for auditing purposes. Which security threat does this phone call represent?

- anonymous keylogging
- spam
- **social engineering**
- DDoS

**Explanation:** Social engineering attempts to gain the confidence of an employee and convince that person to divulge confidential and sensitive information, such as usernames and passwords. DDoS attacks, spam, and keylogging are all examples of software based security threats, not social engineering.

4. Refer to the exhibit. The security policy of an organization allows employees to connect to the office intranet from their homes. Which type of security policy is this?



IT Essentials ( Version 8.0) – IT Essentials 8.0 Chapter 13 exam Q4

- incident handling
- acceptable use
- **remote access**
- network maintenance

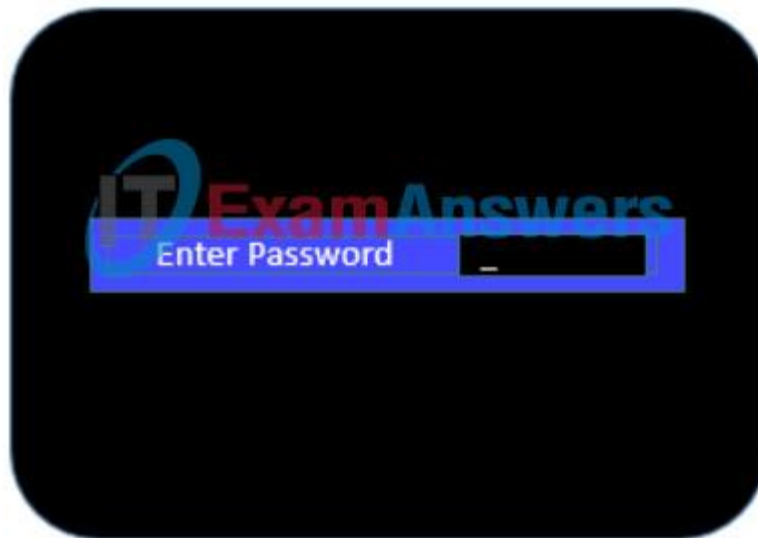
**Explanation:** The remote access policy section of a corporate security policy identifies how remote users can access a network and what is accessible via remote connectivity.

5. A manager approaches a PC repair person with the issue that users are coming in to the company in the middle of the night to play games on their computers. What might the PC repair person do to help in this situation?

- Enable power on passwords in the BIOS.
- Use Device Manager to limit access to the computer.
- Use Event View to document the times logged in and out of the computer.
- **Limit the login times.**

**Explanation:** The technician can limit the time logins can occur on a computer. Using Event Viewer to determine the login times is an action that does not prevent the users from logging into the computer. Power on BIOS passwords are not usually configured for a specific time. Device Manager is used to view settings and operation of devices, not users.

6. Refer to the exhibit. Which type of workstation password is being used?



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- synchronous
- multifactor
- login
- network
- **BIOS**

**Explanation:** A BIOS password is configured by entering the BIOS Setup program.

**7. Which security technique or device wipes the data from a hard drive by being placed near the drive platter for at least 2 minutes?**

- biometric scanner
- erase scope
- EFS
- low-level format
- **degaussing wand**

**Explanation:** A degaussing wand requires being placed over hard drive platters for a couple of minutes, whereas an electromagnetic degaussing device can wipe all data in seconds.

**8. A SOHO company has hired a technician to come in and configure and secure the computers. The technician has decided to configure a local security policy for the machines. Which setting would the technician use to ensure that the user did not make their password the same as their own user account name?**

- minimum password length
- maximum password age
- **meet complexity requirements**
- enforce password history

**Explanation:** The Password must meet complexity requirements option requires that the user not make their own user account name or part of their user account name as their password. This option also requires that the

password have at least three of the following: uppercase letter, lowercase letter, number, and symbol.

**9. Which type of firewall serves as a relay between users and servers on the Internet, inspects all traffic, and allows or denies traffic based on a set of rules?**

- **proxy firewall**
- stateful packet firewall
- operating system firewall
- packet filtering firewall

**Explanation:** There are several types of firewall configurations:

- Packet filter – Packets cannot pass through the firewall, unless they match the established rule set configured in the firewall. Traffic can be filtered based on different attributes, such as source IP address, source port or destination IP address or port.
- Stateful packet inspection (SPI) – This is a firewall that keeps track of the state of network connections traveling through the firewall. Packets that are not part of a known connection are dropped.
- Application layer – All packets traveling to or from an application are intercepted. All unwanted outside traffic is prevented from reaching protected devices.
- Proxy – This is a firewall installed on a proxy server that inspects all traffic and allows or denies packets based on configured rules. A proxy server is a server that is a relay between a client and a destination server on the Internet.

**10. Which two algorithms are used for hash encoding to guarantee the integrity of data? (Choose two.)**

- **SHA**
- SSL
- VPN
- chap checksum
- **MD5**

**11. A retail store wants to secure laptops that are on display. The store manager also wants a record of which employees enter the backroom where inventory is kept. Which security option would work best for this situation?**

- **cable locks and a token-based lock on the backroom**
- a condition that laptops are viewed one at a time and only the owner has a key to the backroom
- security cameras and only the manager having access to the backroom
- guards and log sheets

**Explanation:** Retail solutions have to be flexible for both customers and employees. Physical security products are available to provide a solution such as using cable locks to secure equipment and an electronic lock that records activity on a door.

**12. How can users working on a shared computer keep their personal browsing history hidden from other workers that may use this computer?**

- Move any downloaded files to the recycle bin.
- Reboot the computer after closing the web browser.
- Use only an encrypted connection to access websites.
- **Operate the web browser in private browser mode.**

**Explanation:** When a computer user browses the web in private mode, the following occurs: Cookies are disabled. Temporary Internet files are removed after closing the window. Browsing history is removed after closing the window.

**13. The IT department is reporting that a company web server is receiving an abnormally high number of web page requests from different locations simultaneously. Which type of security attack is occurring?**

- spyware
- social engineering
- adware
- **DDoS**
- phishing

**Explanation:** Phishing, spyware, and social engineering are security attacks that collect network and user information. Adware consists, typically, of annoying popup windows. Unlike a DDoS attack, none of these attacks generate large amounts of data traffic that can restrict access to network services.

**14. What would cause a Microsoft Windows update to fail?**

- The wired or wireless NIC was disabled.
- **A required prior update was not installed.**
- The computer has had its security breached.
- The computer has a virus.

**Explanation:** Two things commonly cause a Windows update to fail: 1. A required older update was not installed. 2. There was a problem with the downloaded update.

**15. A customer uses Internet Explorer and Microsoft Edge as browsers on the computer. The customer asks the technician how to configure the computer to detect and filter phishing websites, to analyze websites for suspicious items, and to check downloads against a list of known malicious files and sites. Which web security feature should the technician demonstrate?**

- **SmartScreen Filter**
- Firewall
- AutoPlay
- ActiveX Filter

**Explanation:** In Internet Explorer, use the **Tools** option to enable. In Microsoft Edge, use the three dotted icon to select **Settings > View advanced settings** to

turn the *Help protect me from malicious sites and downloads with Windows Defender SmartScreen* option on.

**16. A technician is preparing to encrypt a corporate drive by using Microsoft BitLocker. Which BIOS option will the technician need to enable?**

- SSL
- NTFS
- **TPM**
- EFS

**Explanation:** A Trusted Platform Module (TPM) is a motherboard chip used to store security information such as encryption keys, security certificates, and passwords. It is required to be enabled before implementing BitLocker.

**17. After confirming the removal of a virus from a computer, how should the technician ensure and verify the full functionality of the system?**

- Document the problem and the procedures performed to solve it.
- **Check for the latest OS patches and updates.**
- Talk with the user to determine the cause of the problem.
- Gather information from a number of sources to clearly identify the problem.

**Explanation:** After resolving a computer problem, the next step is to verify full functionality by ensuring that the OS is up to date and by testing the operation of the computer and the network that it is connected to. Documenting the issue and solution is the final step, whereas gathering information from the user and other sources are earlier steps in the troubleshooting process.

**18. Which two statements characterize wireless network security? (Choose two.)**

- **Using the default IP address on an access point makes hacking easier.**
- An attacker needs physical access to at least one network device to launch an attack.
- Wireless networks offer the same security features as wired networks offer.
- Wireless guest mode provides open access to a protected LAN.
- **With SSID broadcast disabled, an attacker must know the SSID to connect.**

**Explanation:** The default settings on a wireless network usually include an SSID that is being broadcast as well as default IP address settings. These default settings are considered insecure because with them an attacker can easily see a wireless network and attempt to connect to it and make changes to the network.

**19. What are signatures as they relate to security threats?**

- a unique encryption code used by a known attacker
- the beginning or end of a malware segment that has a specific cyclic redundancy check number
- **one or more code patterns within a specific type of malware**

- the checksum associated with each specific type of malware that is stored in a virus table

**Explanation:** Antimalware software analyzes code patterns within malware to create signatures that are stored in virus definition tables. Antimalware signature files are constantly being updated because malware is constantly morphing into new strands.

**20. Which two items are used in asymmetric encryption? (Choose two.)**

- **a private key**
- a TPM
- a DES key
- a token
- **a public key**

**Explanation:** A token is something that is used to provide two-factor authentication. DES is using an identical key to encrypt and decrypt. Asymmetric encryption uses a private key associated with a public key.

**21. A user notices that files created and saved locally last week are missing and asks the technician to investigate. The technician suspects there has been a security breach. Which type of malware could be responsible?**

- phishing
- adware
- **Trojan**
- spyware

**Explanation:** Trojans can enable unauthorized remote access, provide the attacker with data, corrupt or delete files, use the computer as a source for other attacks, enable unauthorized services, and stop antimalware software.

**22. A technician has been asked by a manager to recommend a security solution for protecting a computer against rootkits. Which security technique should the technician recommend?**

- **antimalware**
- port scan
- ASA
- dual authentication

**23. A technician has been asked by a manager to recommend a security solution for protecting a computer against Trojans. Which security technique should the technician recommend?**

- port scan
- dual authentication
- **antimalware**
- ASA

**24. When would a PC repair person want to deploy the idle timeout feature?**

- **when users are leaving their desk but remaining logged on**
- when users are inserting media and running applications not sanctioned by the company



- when users are playing music CDs and leaving them playing even after the users have left for the day
- when users are surfing the Internet and not doing their job

**Explanation:** The idle timeout and screen lock feature is a great security measure that protects the computer and data accessible through it if the user steps away from the desk for a specified period of time and forgets to lock the computer or log off.

**25. A college student logs onto a college computer for the first time. Which security policy category should be presented to the student?**

- identification and authentication policies
- incident handling policies
- network maintenance policies
- **acceptable use policies**

**Explanation:** The acceptable use policies section of a security policy commonly identifies network resources and usages that are acceptable to the organization. They might also state the ramifications that can occur if this security policy is violated.

**26. A technician is configuring rights and permissions in Windows 7. Which tool will the technician use?**

- Device Manager
- **Local Users and Groups**
- Local Security Policy
- Resource Monitor

**Explanation:** Within the Local Users and Groups tool, a technician can create users, create groups, and assign rights and permissions.

**27. An IT technician wants to create a rule on two Windows 10 computers to prevent an installed application from accessing the public Internet. Which tool would the technician use to accomplish this task?**

- **Windows Defender Firewall with Advanced Security**
- Computer Management
- DMZ
- Local Security Policy

**Explanation:** Windows Firewall with Advanced Security or the Windows 10 Windows Defender Firewall with Advanced Security is used to create inbound and outbound rules, connection security rules such as security traffic between two computers, and monitoring any active connection security rules.

**28. A newly created company has fifteen Windows 10 computers that need to be installed before the company can open for business. What is a best practice that the technician should implement when configuring the Windows Firewall?**

- The technician should remove all default firewall rules and selectively deny traffic from reaching the company network.
- The technician should enable the Windows Firewall for inbound traffic and install other firewall software for outbound traffic control.

- **After implementing third party security software for the company, the technician should verify that the Windows Firewall is disabled.**
- The technician should create instructions for corporate users on how to allow an app through the Windows Firewall using the Administrator account.

**Explanation:** Only disable Windows Firewall if other firewall software is installed. Use the Windows Firewall (Windows 7 or 8) or the Windows Defender Firewall (Windows 10) Control Panel to enable or disable the Windows Firewall.

**29. A technician has been asked by a manager to recommend a security solution for protecting a computer against spyware. Which security technique should the technician recommend?**

- dual authentication
- **antimalware**
- ping sweep
- IPS

**30. A technician has been asked by a manager to recommend a security solution for protecting a computer against worms. Which security technique should the technician recommend?**

- **antimalware**
- SSL
- ping sweep
- IPS

**31. A technician has been asked by a manager to recommend a security solution for protecting a computer against ransomware. Which security technique should the technician recommend?**

- encryption
- ping sweep
- IPS
- **antimalware**

**32. A technician has been asked by a manager to recommend a security solution for protecting a computer against keyloggers. Which security technique should the technician recommend?**

- ASA
- **antimalware**
- ping sweep
- IPS

**33. A system administrator has been asked to protect the sensitive data on the Windows 7 computers of all management employees. Which Windows feature can be used to selectively encrypt individual files within the user accounts of each manager?**

- BitLocker
- **EFS**
- TPM

- Windows Update

**Explanation:** Encrypting File System (EFS) is a Windows feature that can be used to encrypt files and folders linked to a specific user account. BitLocker is a Windows feature that can be used to encrypt the entire hard drive volume. TPM is a specialized chip on the motherboard that stores information specific to the computer system such as encryption keys, digital certificates, and passwords. Windows Update is used to update the operating system, not to encrypt data.

**34. A group of users on the same network are all complaining about their computers running slowly. After investigating, the technician determines that these computers are part of a zombie network. Which type of malware is used to control these computers?**

- rootkit
- spyware
- virus
- **botnet**

**Explanation:** A botnet is a network of infected computers called a zombie network. The computers are controlled by a hacker and are used to attack other computers or to steal data.

**35. A technician has been asked by a manager to recommend a security solution for protecting a computer against adware programs. Which security technique should the technician recommend?**

- **antimalware**
- IPS
- ping sweep
- ASA

## IT Essentials (Version 8.0) – ITE 8.0 Certification Checkpoint Exam Chapters 12 – 13 Answers

**1. Users in a company have complained about network performance. After investigation, the IT staff has determined that the attacker is using a table of words that potentially could be used as passwords. What is the type of network attack?**

- DDoS
- DNS poisoning
- **dictionary**
- SYN flood

**2. Which action would help a technician to determine if a denial of service attack is being caused by malware on a host?**

- Log on to the host as a different user.
- Disable ActiveX and Silverlight on the host.

- **Disconnect the host from the network.**
- Install rogue antivirus software on the host.

**Explanation:** If a host infected with malware is causing a denial of service attack by flooding the network with traffic, disconnecting the host from the network can stop the attack. ActiveX and Silverlight are both examples of web software designed to provide interactive experiences on web pages. A rogue antivirus is a type of attack where the malware appears to be an antivirus telling the users that their system is infected. If a system is infected with malware, it is unlikely that logging on as a different user would prevent the malware from continuing the denial of service attack.

**3. It has been noted that the computers of employees who use removable flash drives are being infected with viruses and other malware. Which two actions can help prevent this problem in the future? (Choose two.)**

- Repair, delete, or quarantine the infected files.
- **Disable the autorun feature in the operating system.**
- **Set virus protection software to scan removable media when data is accessed.**
- Configure the Windows Firewall to block the ports that are used by viruses.
- Enable the TPM in the CMOS settings.

**Explanation:** Windows Firewall filters data from the network not from removable flash drives. The TPM is used for hardware authentication of users and devices, not malware protection. Repairing, deleting, or quarantining infected files will remove a current virus infection but not prevent future infections.

**4. What are two potential user benefits of rooting or jailbreaking a mobile device? (Choose two.)**

- A custom OS may reduce sandboxing features.
- **The operating system can be fine-tuned to improve the speed of the device.**
- The root directory of the device is blocked.
- **The user interface can be extensively customized.**
- The operation of the carrier cellular network may be affected.

**Explanation:** Rooting or jailbreaking a mobile device usually enables extensive customization of the user interface and can enable performance enhancement. The three incorrect options are all considered potential risks to the user, the device, and the network that may result from rooting or jailbreaking a mobile device.

**5. A hard drive used by an administrative assistant in a Federal Reserve Bank is replaced with a new larger capacity drive. The technician brings the old drive into the technical office and is asked for the drive so it can be used in a different computer. How should the technician handle this situation?**

- Turn the drive over to the second technician with a request to format the drive first as exFAT and then as NTFS.

- Deny the request and require a certificate of destruction.
- **Perform a drive wipe before turning the drive over to the second technician.**
- Use a degausser before turning the drive over to the second technician.

**Explanation:** Drives can be recycled or repurposed as long as best practices are adhered to. Drive wiping software can be used to overwrite existing data multiple times so that the original data cannot be read.

**6. What are two benefits of using an ext4 partition instead of ext3? (Choose two.)**

- an increase in the number of supported devices
- decreased load time
- **improved performance**
- compatibility with CDFS
- compatibility with NTFS
- **increase in the size of supported files**

**Explanation:** Based on the ex3 file system, an ext4 partition includes extensions that improve performance and an increase in the of supported files. An ext4 partition also supports journaling, a file system feature that minimizes the risk of file system corruption if power is suddenly lost to the system.

**7. What is the most effective way of securing wireless traffic?**

- wireless MAC filtering
- WEP
- **WPA2**
- SSID hiding

**Explanation:** SSID and wireless MAC filtering are not encryption methods. WPA2 is more secure than WEP or WPA for encrypting traffic.

**8. Which two conditions must be met for mobile device security measures such as remote lock and remote wipe to function? (Choose two.)**

- **The device must be powered on.**
- Sandboxing must be enabled.
- The passcode must be disabled.
- **The device must be connected to a network.**
- The GPS locator must be enabled.

**Explanation:** Successful mobile device remote security measures require the device to be powered on and connected to a network. The device passcode and GPS status do not affect the operation of remote security measures. Mobile devices run apps within a sandbox by default.

**9. A user has reported SMART messages displayed on the computer screen several times over the past few weeks. Which computer part should the technician check first?**

- motherboard
- CPU
- **hard drive**

- RAM
- power supply

**Explanation:** Self-Monitoring, Analysis, and Reporting Technology (S.M.A.R.T or SMART) is a feature built into hard drives to detect and report drive issues.

**10. The corporate security policy states that all remote connections use only secure tunnels for data communications. Which encryption technique secures data traveling across the public Internet as if it were traveling across the corporate LAN?**

- **VPN**
- WEP
- WPA
- MD5

**Explanation:** A VPN (virtual private network) provides an encrypted tunnel for data communications across the Internet. WEP and WPA are wireless encryption protocols. MD5 is a data hashing algorithm.

**11. A user complains about not being able to modify a shared remote file. The technician investigates the issue and notices that both NTFS and share permissions have been assigned to the shared folder and file. What is the effective permission when this security technique has been applied?**

- The share and NTFS permissions will be added.
- **The most restrictive share or NTFS permission will be applied.**
- All remote access is blocked.
- Only the original owner can modify the file either locally or from a remote location.

**Explanation:** If a shared folder has been given the full control NTFS permission and the read share permission, the effective permission will be the most restrictive one which is read in this case.

**12. Which two security precautions will help protect a workplace against social engineering? (Choose two.)**

- **registering and escorting all visitors to the premises**
- ensuring that all operating system and antivirus software is up to date
- encrypting all sensitive data stored on the servers
- performing daily data backups
- **ensuring that each use of an access card allows access to only one user at the time**

**Explanation:** Encrypting data, keeping software up to date, and backing up data are all security precautions, but will not protect against unauthorized physical access to premises by people trying to gather information for malicious purposes.

**13. A PC technician has been asked by a supervisor to recommend a security solution for a machine where the antimalware software cannot remove all of the malware. Which security technique should the technician recommend?**

- Buy an ASA.
- Buy an IPS.
- **Use Windows Safe Mode.**
- Use SSL.

14. Users in a company have complained about network performance. After investigation, the IT staff has determined that the attacker injected false records on the server that translates IP addresses to domain names. What is the type of network attack?

- SYN flood
- DDoS
- **DNS poisoning**
- zero-day

15. Users in a company have complained about network performance. After investigation, the IT staff has determined that the attacker was using a specific technique that affected the TCP three-way handshake. What is the type of network attack?

- zero-day
- DNS poisoning
- dictionary
- **SYN flood**

**Explanation:** The TCP SYN flood attack exploits the TCP three-way handshake. The threat actor continually sends TCP SYN session request packets with a randomly spoofed source IP address to an intended target.

16. A PC technician has been asked by a supervisor to recommend a security solution for preventing tailgating. Which security technique should the technician recommend?

- **Use a mantrap.**
- Buy an IPS.
- Buy an ASA.
- Use encryption.

17. A PC technician has been asked by a supervisor to recommend a security solution for a company that wants a device to monitor incoming and outgoing traffic and stop any malicious activity. Which security technique should the technician recommend?

- Use Windows Safe Mode.
- Buy an ASA.
- **Buy an IPS.**
- Use SSL.

18. Users in a company have complained about network performance. After investigation, the IT staff has determined that zombies were used to attack the firewall. What is the type of network attack?

- SYN flood
- **DDoS**
- DNS poisoning
- zero-day



19. Users in a company have complained about network performance. After investigation, the IT staff has determined that the attacker is using a vulnerability that is known to the software vendor, but not patched yet. What is the type of network attack?

- **zero-day**
- SYN flood
- DDoS
- DNS poisoning

20. Users in a company have complained about network performance. After investigation, the IT staff has determined that the attacker is using a technique that compares hashed passwords to potential hashes the hacker has. What is the type of network attack?

- zero-day
- SYN flood
- DNS poisoning
- **rainbow table**

21. A PC technician has been asked by a supervisor to recommend a security solution for protecting a computer used to log in at a dental clinic from someone using a bootable disk containing hacking tools. Which security technique should the technician recommend?

- **Disable ports.**
- Use a mantrap.
- Use Windows Safe Mode.
- Employ ping sweeps.

22. A PC technician has been asked by a supervisor to recommend a security solution for a manager traveling who needs access to internal corporate resources. Which security technique should the technician recommend?

- Use Windows Safe Mode.
- Buy an IPS.
- **Use a VPN.**
- Run vulnerability scanners.

23. Users in a company have complained about network performance. After investigation, the IT staff has determined that the DNS server was sent with an enormous amount of false requests, thus overwhelming the server. What is the type of network attack?

- zero-day
- SYN flood
- dictionary
- **DoS**

24. A PC technician has been asked by a supervisor to recommend a security solution for phishing. Which security technique should the technician recommend?

- Use a mantrap.
- Use Windows Safe Mode.
- **Provide security awareness training.**
- Implement dual authentication.

# IT Essentials (Version 8.0) Chapter 14 Exam Answers ITE v8.0

1. What is a reason to escalate a problem from a level one technician to a level two technician?

- when a peripheral device needs to be replaced
- when the screen resolution of a customer PC needs to be adjusted
- **when drivers, applications, or operating systems need to be installed**
- when the equipment needs to be rebooted

**Explanation:** A technician should always follow company policies for problem escalation, but in general a problem should be escalated to a level two technician anytime it involves an advanced procedure that could cause serious damage to user equipment, data loss, or cause a widespread outage. Also, if the technician does not have the necessary skills or tools to troubleshoot an issue effectively, the issue should be escalated to a level two technician.

2. A programmer used an operator to compare values within a program and the resulting logical data type was “false”. Which test condition would have provided the result of “false”?

- $4 \geq 1$
- **$8 \neq 8$**
- $3 == 3$
- $6 \leq 6$

**Explanation:**  $==$  represents equal

$\neq$  represents not equal

$<$  represents less than  $>$  represents greater than

$\leq$  represents less than or equal to  $\geq$  represents greater than or equal to

Because 8 is equal to 8, and the  $\neq$  operator is used, the resulting output is “false”.

3. What should a level two technician do immediately after receiving an escalated work order from a level one technician?

- Send the work order to a level three technician and ask for support.
- Call the level one technician and ask questions about the problem.
- Document suggestions to solve the problem in the work order and return it to the level one technician.
- **Call the customer back to ask any additional questions and resolve the problem.**

**Explanation:** When a problem cannot be resolved within a predetermined amount of time, the level one technician prepares an escalated work order. The level two technician receives the escalated work order with the description of the problem. The level two technician then calls the customer back to ask any additional questions and resolve the problem.

4. A worker in the records department of a hospital in the United States accidentally sends a patient's medical record to a printer in another department. When the worker arrives at the printer, the patient record printout is missing. Which two types of compliance standards best match the breach of confidentiality? (Choose two.)

- GDPR
- **PHI**
- PII
- **ePHI**
- DRM
- PCI

**Explanation:** Both protected Health Information (PHI) and Electronic Protected Health Information (ePHI) includes patient name, addresses, visiting dates and more. The Health Insurance Portability and Accountability Act (HIPAA) regulates and provides severe penalties for breaches of PHI and ePHI.

5. A support desk trainer is teaching a new support desk technician some basic rules about starting a conversation with a customer. Which statement describes the rules the trainer should be teaching?

- **Learn the name of the customer and create a connection with the customer. Next ask questions that assess the knowledge level of the customer.**
- Start by asking close-ended questions about what the customer understands of the problem and then direct the customer through the correction process.
- Ask the customer what the problem is and then introduce yourself.
- Assess what the customer knows of the support desk process and then use close-ended questions to guide the customer through the correction process.

**Explanation:** The three rules to remember at the beginning of a conversation with a customer are these:

Know your customer

Create a one to one connection with your customer.

Understand the knowledge level of your customer

6. What is the definition of cyber law?

- the process of collecting and analyzing data from computer systems, networks, wireless communications, and storage devices
- a contract that defines expectations between an organization and IT service vendors for an agreed upon level of support
- a single law defining criminal acts that are committed online
- **the collection of international, country, and local laws that affect computer security professionals**

**Explanation:** Cyber law describes the collection of international, regional, country, and state laws that affect computer security professionals.

**7. A customer is angry and calls to complain that the service scheduled on the computer took longer than expected. The technician reviews the work order and notices that the service was performed by a new employee. How should the technician respond?**

- Put the customer on hold until a supervisor is available.
- Verify that the computer is working properly now.
- Explain that the repair technician sent to perform the service is inexperienced.
- **Listen to the complaint and then apologize for any inconvenience caused by the lengthy service on the computer.**

**Explanation:** When dealing with an angry customer, listen and without interrupting let the customer explain the problem. Show sympathy. Apologize for the problem and its inconvenience.

**8. Which change management process component is concerned with the cost and resources necessary for implementation?**

- identification
- approval
- **assessment**
- implementation

**Explanation:** There are several change management process components that help changes, installations, and upgrades go more easily. The assessment component identifies the business processes that are affected and the costs and resources required.

**9. What is a characteristic of the open source license of an application software?**

- **It allows users to modify and share the source code.**
- It requires registration instead of purchasing.
- It does not require purchase in order to use the software.
- It requires acknowledged completion of a professional training course prior to use.
- It cannot be used for campus-wide deployment.

**Explanation:** An open source license is a copyright license for software that allows developers to modify and share the source code that runs the software. Open source software could be free to use or require purchase. In either case, users have access to the source code. Open source software could be used as personal software or deployed enterprise wide. User registration is an encouraged optional feature.

**10. Which is true regarding the treatment of customer property?**

- Data left on a customer's PC is not property because it is visible to others.
- Customer property is limited to hardware.
- **A customer's phone list is customer property and must be kept private.**

- A technician does not have to care about copies of customer files because it is not the original.

**Explanation:** All customer property is important, including files, phone lists, hardware and other data, and should be treated with respect. Any data should be considered as private and confidential.

**11. Which statement best describes a call center?**

- It is a help desk used by customers to make an appointment to report their computer problems.
- It is a store-front environment where the customers go with their computers to have them fixed.
- **It is a place that exists within a company and provides computer support to both employees and customers of the company.**
- It is a busy, fast-paced work environment where agents contact customers to arrange preventive maintenance appointments.

**Explanation:** A call center is a place that customers call to report problems with software or hardware. It may be an independent business that sells computer support as a service or it may exist within a company and offer service to both employees of the company and outside customers that use company products.

**12. When performing computer forensics, what can be prevented with a properly and carefully documented chain of custody?**

- cyber crime
- **evidence tampering**
- identity theft
- copying of copyrighted materials

**Explanation:** A chain of custody created with accurate documentation can prevent evidence tampering so that the integrity of the evidence can be assured.

**13. What is a common responsibility of a level one call center technician?**

- remotely connecting to customer devices and implementing driver and software updates
- **entering a concise description of a customer problem into a ticketing system**
- receiving escalated work orders from a lower level technician
- calling back customers and asking additional questions to solve the problem

**Explanation:** The primary responsibility of a level one technician is to gather pertinent information from a customer and to enter the information into a work order or ticket system.

**14. Which statement is characteristic of most personal software licenses?**

- A user is allowed to share the software with friends.
- A company is allowed to use the software campus wide.
- **A user is allowed to install the software on only one computer.**

- Developers are allowed to modify and share the source code that runs the software.

**Explanation:** Most personal software licenses allow a user to run the software on only one PC. Some personal software licenses allow a user to copy the software onto multiple PCs. These licenses usually specify that the copies cannot be run at the same time. Some personal software licenses are for commercial products that require purchase. There are personal software licenses for open source software that are free to use. Personal software licenses are intended for personal use of the product. Software to be deployed campus wide needs site licenses or enterprise licenses.

**15. A technician is attempting to securely configure a Linux web server on the public-facing side of the firewall. What port type and number are most likely required to be open on the firewall to allow this traffic through?**

- UDP port 22
- **TCP port 22**
- UDP port 23
- TCP port 3389
- TCP port 23
- UDP port 3389

**Explanation:** Secure Shell (SSH) is a secure remote service that encrypts the entire session. The port number for SSH is TCP port 22.

**16. Which type of documentation is concerned with specifying what data must be collected and how long it must be retained in regards to an organization?**

- operations
- **policies**
- user documentation
- projects

**Explanation:** There are four broad categories of IT documentation: policies, operations, projects, and user documentation. Policy documentation is concerned with regulatory compliance with local, state, and federal regulations.

**17. Which task would require that a problem be escalated to a level two technician?**

- checking loose external cables
- cleaning a mouse
- **changing CMOS settings**
- changing toner cartridges

**Explanation:** Straightforward tasks such as cleaning the mouse, changing printer toner, and checking cables can be managed by a level one technician. Typically, more complex tasks such as changing CMOS settings and running diagnostic software would be escalated to a level two technician.

**18. Which are two examples of good customer service? (Choose two.)**

- A technician speaks slowly and uses common industry jargon and terms with the customer.
- A technician continually reminds the customer that an issue was due to customer neglect.
- **A technician notifies a customer as soon as possible that there may be a delay.**
- **A technician follows up with a customer after services are completed.**
- A technician repeatedly encourages a customer to agree to a product warranty.

**Explanation:** Good customer service means meeting or exceeding customer expectations. Customers expect service technicians to be on time and to communicate if they will be late. Customers also appreciate a follow up communication after service is rendered.

**19. Which two programming languages require the program to be converted into executable code using a compiler? (Choose two.)**

- **Java**
- Python
- VBScript
- **C#**
- PowerShell

**Explanation:** Compiled languages like C, C++, C#, and Java need to be converted into executable code using a compiler.

**20. A technician is troubleshooting a PC in a workplace environment and finds many pirated movies on the hard drive. What should the technician do?**

- Make a copy of all the pirated content and send it to the law enforcement authorities.
- Remove the pirated content and document all work done.
- **Report the findings through the proper channels.**
- Advise the user that downloading pirated content is illegal and that the user should refrain from doing so.

**Explanation:** On discovering illegal activity on a PC, the technician should report it through the proper channels as per company policy.

**21. What does a technician need in order to make changes to software installed on the computer of a customer?**

- verification that the software is legal
- two witnesses
- the authorization of a more senior technician
- **customer authorization**

**Explanation:** To make any changes to a computer, a technician needs authorization from the customer. The presence of either another technician or other witnesses does not entitle the technician to either install or modify software, even if it is legal.



**22. Why is a chain of custody important in a cyber crime case?**

- It protects copyrighted materials.
- It ensures conviction
- It proves guilt.
- **It authenticates evidence.**

**Explanation:** Evidence must be authenticated before it can be admitted in court. A chain of custody helps to authenticate the evidence by preventing tampering.

**23. What two actions should a call center technician avoid when dealing with an angry customer? (Choose two.)**

- **putting the customer on hold or transferring the call**
- apologizing for any inconvenience caused to the customer
- sympathizing with the customer
- **spending time explaining what caused the problem**
- letting the customer explain the problem without interruption

**Explanation:** When dealing with an angry customer a technician can help the customer focus on the problem by: Letting the customer explain the problem without interruption

Sympathizing with the customer

Apologizing for inconvenience

The technician should avoid further angering the customer by: Putting the customer on hold

Explaining what caused the problem

**24. What is the definition of a script file?**

- **A simple text file used to automate processes and tasks.**
- A simple file with a single statement that loops repeatedly.
- A file that is compiled and translated into machine language before executing.
- A file that is the output of a conditional statement.

**Explanation:** A script file is a simple text file written in a form of scripting languages to automate processes and tasks on various operating systems. The commands can be entered on the command line one at a time. A script file, however, provides a more effective way to execute multiple commands.

**25. What are two examples of personally identifiable information (PII)? (Choose two.)**

- **credit card number**
- first name
- language preference
- **street address**
- IP address

**Explanation:** Personally identifiable information (PII) is any data that could potentially identify and track a specific individual. A credit card number and street address are the best examples of PII.

**26. What is a typical task performed by a level one technician in a call center?**

- solving the problem that might require opening up the computer case
- using remote access software to troubleshoot the customer computer
- picking up an escalated work order and calling the customer for further information
- **gathering information when a customer calls for help**

**Explanation:** The primary responsibility of a level one technician is to gather information from the customer. The level one technician needs to accurately enter all the information into the work order. When the problems are very simple to resolve, a level one technician can take care of these without escalating the work order. However, when a problem requires the expertise of a level two technician, the level one technician initiates an escalated work order so that a level two technician will be involved to solve the problem.

**27. Which two rules pertain to the general daily activities of employees in a call center environment? (Choose two.)**

- If a technician takes a call from a customer the technician does not like, the technician should pass the call to another technician.
- If a customer complains about another technician, the technician who is taking the call should agree with opinion of the customer.
- The technician should adjust the work chair to a height that is high enough so that wrists angle downwards toward the keyboard.
- **The technician should be sure to treat all customers equally.**
- **The technician should contact the customer if the technician is going to be late for a follow-up appointment.**

**Explanation:** There are rules that call centers generally use to cover the daily activities of their employees. These rules are designed to ensure that there is always adequate coverage for incoming calls, and that the customer is not unduly inconvenienced when working with the call center employees. A high rate of customer satisfaction is always a primary goal of any call center.

**28. During computer forensics investigations, which type of data is lost when power is removed from the computer?**

- data that is stored on solid state drives
- data that is stored on magnetic disk
- data that is stored to an external drive
- **data that is stored in RAM**

**Explanation:** Volatile data that is contained in cache, RAM, and CPU registers is lost when power is removed from the computer.

**29. A system administrator needs to perform manual updates on a remote Linux workstation using a Windows 10 PC. Which remote access tool should the administrator use to securely access and configure the Linux device across the network?**

- **SSH client**
- Telnet client
- Windows Remote Desktop client
- Windows Remote Assistance client

**Explanation:** The Windows administrator should use Secure Shell (SSH) TCP port 22. SSH allows the administrator to connect remotely and securely to the Linux workstation in order to safely authenticate and then perform updates on the workstation.

**30. A technician receives a call from a customer who is too talkative. How should the technician handle the call?**

- Talk over the customer and quickly gather the necessary information to be of help.
- Use open-ended questions and repeat all the information back to the customer to politely show that unnecessary information is being given.
- **Allow the customer to speak without interruption and then try to use closed-ended questions to gather data.**
- Politely step in and gain control of the call by asking the customer social questions.

**Explanation:** If a customer is too talkative, the technician should not interrupt the customer but attempt to regain control of the call by asking closed ended questions after customer is through speaking.

## IT Essentials 7.0 8.0 Practice Final Exam (Chapters 1-9) Answers Full

**1. What is the function of the power supply?**

- **to convert AC power into a lower voltage DC power**
- to convert AC power into a higher voltage DC power
- to convert DC power into a lower voltage AC power
- to convert DC power into a higher voltage AC power

**Explanation:** The power supply converts alternating current (AC) power coming from a wall outlet into direct current (DC) power, which is of lower voltage. DC power is required for all the components inside the computer.

**2. Which two motherboard components connect to the Northbridge chipset? (Choose two.)**

- NIC
- USB 2.0 devices
- USB 3.0 devices
- FireWire devices
- **RAM**
- **video card**