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[IT Essentials \(ITE v6.0 + v7.0\) Chapter 5 Exam Answers 100%](#)

1. 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.)

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

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

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

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.

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

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

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. When would a printer be considered a network host?

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

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.

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?

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

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

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

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

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.

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

- repeater
- hub
- **switch***
- 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.

8. What is a common function of a proxy server?

- **to store frequently accessed web pages on the internal network***
- to control who is permitted to access the internal network
- to detect malicious signatures by monitoring traffic that is entering 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.

9. 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.

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

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

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

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

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

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.

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

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

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

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

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.

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

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

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

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

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

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.

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

- 67
- **68***
- 20
- 80
- 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.

17. 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 port number that is used by each application.***
- 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.

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.

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

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

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

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

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

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

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

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.

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

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

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

22. 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?

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

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.

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

- DHCP
- **email***
- proxy
- 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.

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

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

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

- **NetBIOS (NetBT)***
- SMB/CIFS
- HTTPS
- SLP

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

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

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

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

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

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

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

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

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

- **LDAP***
- SMB/CIFS
- HTTPS
- SLP

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

- **SMTP***
- SMB/CIFS

- HTTPS
- SLP

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

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

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

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

34. 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.

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

- **It connects multiple end devices and can be configured for VLANs and port security.***
- 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.

36. 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.

37. 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.

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

- **It is a device whose sole purpose is to connect end devices and to microsegment a LAN.***
- 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.

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

- **It connects the network of a user to the digital infrastructure of a phone company, providing always-on service.***
- 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.

40. 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.

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

- **It connects networks and forwards traffic to remote networks by using IP addressing information.***
- 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.

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

- **It is a device that allows a network administrator to manage many remote networking devices from a central location.***
- It transfers small amounts of DC current over Ethernet cables to power low voltage devices such as wireless access points and 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.

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

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

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.

44. 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 can be inserted in the middle of a cable run to add power.
- It transfers small amounts of DC current over Ethernet cables to power low voltage devices such as wireless access points and surveillance cameras.
- It is a device that uses existing electrical wiring to connect devices and sends data using specific frequencies.

IT Essentials v6.0:

1. What are two functions of an operating system? (Choose two.)

- **controlling hardware access***
- **managing applications***
- text processing
- flow chart editing
- program compilation
- web browsing
- controlling the BIOS

2. Which two methods should a technician use to update a device driver? (Choose two.)

- Insert the operating system installation media and load the driver from there.
- **Use the media that came with the device.***
- Buy another operating system license.
- **Download the driver from the website of the manufacturer.***
- Perform a firmware update.

3. What is the term for the ability of a computer to run multiple applications at the same time?

- multiuser
- **multitasking***

- multimedia
 - multiprocessing
- 4. What is provided by an operating system that has multiprocessing capability?**
- **support for two or more processors***
 - support for two or more users
 - the capability to run multiple applications at the same time
 - the ability to run different parts of a program at the same time
- 5. What is used by an operating system to communicate with hardware components?**
- **device driver***
 - BIOS
 - CMOS
 - Application Program Interface
- 6. Which application interface is comprised of multiple APIs that support multimedia tasks in Windows operating systems?**
- **DirectX***
 - Java
 - Windows API
 - OpenGL
- 7. Which version of Windows introduced the Metro user interface, which can be used on desktops, laptops, mobile phones, and tablets?**
- Windows XP
 - Windows Vista
 - Windows 7
 - **Windows 8 ***
- 8. Where can a technician look to determine if specific computer hardware or software has been tested to work with Windows 7?**
- **Microsoft Compatibility Center***
 - Microsoft Knowledge Base
 - Windows 7 manual
 - Windows Easy Transfer
- 9. What is critical to consider when determining the version of Windows to install on a desktop computer?**
- version of Microsoft Office installed
 - type of monitor installed
 - off-the-shelf applications installed
 - **customized applications installed ***
- 10. A user downloads and uses the Windows 7 Upgrade Advisor to generate a report on a PC that is being considered for an operating system upgrade. What information would the report contain?**
- **recommended changes to hardware***
 - recommended changes to file systems
 - recommended changes to user permissions
 - recommended changes to directory structures
- 11. What are two features of the active partition of a hard drive that is using MBR? (Choose two.)**
- **The active partition must be a primary partition.***

- Up to four primary partitions can be marked as active.
- An active partition must be assigned C: as the drive letter.
- **The operating system uses the active partition to boot the system.***
- The active partition may include the manufacturer recovery partition.

12. A computer with the Windows 7 operating system fails to boot when the system is powered on. The technician suspects that the operating system has been attacked by a virus that rendered the system inoperable. What measure could be taken to restore system functionality?

- Use a differential backup to restore the system.
- Use an incremental backup to restore the system.
- **Use a system image that was created prior to the failure to restore the system.***
- Run chkdsk on the affected drive to restore system files to their post-installation state.

13. What is the purpose of a recovery partition?

- to provide a copy of the C: partition and data from the last backup in case of failure
- to provide a backup copy of the BIOS
- to return the system to an earlier state to recover from a failed update
- to restore the computer to the factory state without deleting user files
- **to restore the computer to its factory state***

14. What Windows 8 tool allows the computer to be rolled back to its factory state without losing any user files?

- recovery partition
- System Restore
- **Refresh your PC***
- BIOS backup

15. 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?

- 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.
- **Access the Advanced Startup options menu before the OS loads to disable the auto restart function.***

16. A user installs a new video driver on a computer that was working properly. After the new driver is installed and the computer is restarted, the computer fails to boot. How can the user quickly return the computer to a working state?

- Restart the PC with the Windows System Recovery disc and use the Startup Repair utility.
- **Press F8 while the computer is booting and choose the Last Known Good Configuration option.***
- Boot the system with the original Windows installation media and choose the Repair Your Computer option.
- Press F8 while the computer is booting and choose the Start Windows Normally option.

17. Where are the settings that are chosen during the installation process stored?

- in the recovery partition
- in BIOS
- in flash memory
- **in the Registry ***

18. Why is it important to register a DLL file in Windows?

- **so that any program needing to use that specific program code can locate the file***
- so that the operating system can be restored
- so that the computer can be restored to factory settings
- so that copyright laws are not violated when computer images are made

19. A Windows 8.1 system is unable to boot properly. What is the procedure to boot this system into Safe Mode?

- From the command prompt run the shutdown -r -s command.
- Run the MSCONFIG utility and choose the option Selective Startup.
- Reboot the system and press Del or F2 depending on the system.
- **Reboot the system, press and hold F8 until a menu is displayed, and then choose Safe Mode.**

*

20. A technician has installed a new video driver on a Windows 8.1 computer and now the monitor shows distorted images. The technician needs to install a different video driver that is available on a network server. What startup mode should the technician use to access the driver on the network?

- Safe Mode
- **Safe Mode with Networking***
- Debugging Mode
- Safe mode with Command Prompt

21. A technician is considering implementing RAID 5 before installing Windows. Which technology does RAID 5 use?

- spanning
- mirroring
- **striping with parity***
- lazy write

22. What is a characteristic of a spanned volume?

- Data is stored across two or more disks for faster read and write access.
- **Data is seen as one volume, but is stored across two or more disks.***
- A copy of one disk is placed on another disk for fault tolerance.
- Data is striped across a total of three or more disks, but one disk is used for parity in order to provide fault tolerance.

23. Which Windows tool is used to determine if a dynamic disk is corrupted?

- **Disk Management***
- Device Manager
- Microsoft System Preparation
- Bootmgr

24. A user has upgraded a PC to Windows 7 but still needs to use an application that is created for the earlier version of Windows. Which mode of operation within Windows 7 can be used to run the application?

- real mode
- protected mode
- virtual mode
- **compatibility mode***
- multiuser mode

25. Within which folder would a user of 64-bit Windows 8 find 32-bit programs?

- C:Program Files
- **C:Program Files (x86)***
- C:Program Files (x64)
- C:Program Files (x32)

Older Version:

26. Which Windows administrative tool displays the usage of a number of computer resources simultaneously and can help a technician decide if an upgrade is needed?

- Services
- **Performance Monitor***
- Component Services
- Event Viewer

27. What two terms can be used to describe the Windows Virtual PC? (Choose two.)

- system resource management
- server consolidation
- **hypervisor***
- **Virtual Machine Manager***
- operating system sharing

28. A technician has loaded an incorrect video driver on a Windows 7 computer. How can the technician revert to a previous driver?

- **Select the video adapter card Properties in Device Manager, select the Driver tab, and click Roll Back Driver.***
- Use the Devices and Printers control panel to right-click on the monitor, and select Properties.Select Roll Back Driver.
- Select Create a Restore Point from System Tools.
- Use regedit to remove the information about the graphics driver from the registry.

29. Which two Windows utilities can be used to help maintain hard disks on computers that have had long periods of normal use? (Choose two.)

- **Disk Cleanup***
- Disk Format
- Disk Maintenance
- Disk Partition
- **Disk Defragmenter***

30. Which command is used from the Windows command prompt to schedule a program to run at a specific time?

- TASKKILL
- **AT***
- CMD
- TASKLIST

31. A user notices that some of the programs that are installed before upgrading to Windows 7 no longer function properly after the upgrade. What can the user do to fix this problem?

- **Run the programs in Compatibility Mode.***
- Lower the UAC setting in the Change User Account Control settings dialog box of the User Accounts control.
- Use the System Restore utility.

- Update the driver for the graphics card.
- 32. 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?**
- Restore the ntdetect.com file from the installation media.
- Run fdisk /mbr from the command prompt.
- Restore the boot.ini file from the installation media.
- **Reinstall the application. Then, run the uninstall program.***
- 33. Which Windows 7 feature allows a user to view the contents of the desktop by moving the mouse to the right edge of the taskbar?**
- thumbnail previews
- Search
- jump lists
- Shake
- Snap
- **Aero Peek***
- 34. After upgrading a computer to Windows 7, a user notices that the UAC (User Account Control) panel appears more frequently. How can the user reduce the frequency with which the UAC appears?**
- Replace the graphics card with one that meets the minimum hardware requirements for Windows 7.
- In the Performance Options dialog box of the Performance Information and Tools control panel, choose Adjust for Best Performance.
- **Lower the UAC setting in the Change User Account Control settings dialog box of the User Accounts control panel.***
- Reinstall all user programs in Compatibility Mode.
- 35. How much RAM can theoretically be addressed by a 64-bit operating system?**
- 32 GB maximum
- 64 GB maximum
- 16 GB maximum
- 4 GB maximum
- **128 GB or more***
- 36. A technician needs to upgrade the file system on a Windows XP computer from FAT32 to NTFS without losing user data. Which course of action should be taken to upgrade the file system to NTFS?**
- Use the Disk Management utility to convert the drive from Basic to Dynamic, which changes the file system to NTFS automatically.
- Reformat all of the existing partitions and use the NTFS file system.
- **Run the CONVERT.EXE utility to convert the file system to NTFS.***
- Reinstall Windows XP and to format the drive choose NTFS when prompted.
- 37. To which category of hypervisor does the Microsoft Virtual PC belong?**
- Type 1
- **Type 2***
- Type 3
- Type 4
- 38. 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 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.***
- The virtualization environment has better tools to develop mitigation solutions.
- The lab exercises are performed faster inside of the virtualized environment.

39. What are two advantages of the NTFS file system compared with FAT32? (Choose two.)

- NTFS is easier to configure.
- **NTFS provides more security features.***
- **NTFS supports larger files.***
- NTFS allows faster access to external peripherals such as a USB drive.
- NTFS allows faster formatting of drives.
- NTFS allows the automatic detection of bad sectors.

40. Which two statements are true about restore points? (Choose two.)

- A technician should always create them after updating the operating system.
- **They are useful to restore the computer to an earlier time when the system worked properly.***
- They recover personal files that have been corrupted or deleted.
- **They contain information about the system and registry settings that are used by the Windows operating system.***
- They back up personal data files.

41. A user notices that a PC is running slowly and exhibits a delayed response to keyboard commands. What is a probable cause of this symptom?

- The video card does not support the resolution that is being used.
- A recently installed device driver is incompatible with the boot controller.
- **A process is using most of the CPU resources.***
- One or more program files have been deleted.

42. What would be the result of having a corrupt Master Boot Record?

- The printer will function incorrectly.
- **The operating system will fail to start.***
- A new application will fail to install.
- The keyboard will be unresponsive to the user.