**Contestant Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Time: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Rank: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**



**DEVICE CONFIGURATION & TROUBLESHOOTING**

(305)

**REGIONAL 2022**

**CONCEPT KNOWLEDGE:**

Multiple Choice (50 @ 2 points each) (100 points)

**TOTAL POINTS (100 points)**

**Test Time: 60 minutes**

**GENERAL GUIDELINES:**

*Failure to adhere to any of the following rules will result in disqualification:*

1. Member must hand in this test booklet and all printouts if any.
2. No equipment, supplies, or materials other than those specified for this event are allowed in the testing area. No previous BPA tests and/or sample tests (handwritten, photocopied, or keyed) are allowed in the testing area.
3. Electronic devices will be monitored according to ACT standards.

**MULTIPLE CHOICE**

Identify the letter of the choice that *best* completes the statement or answers the question.

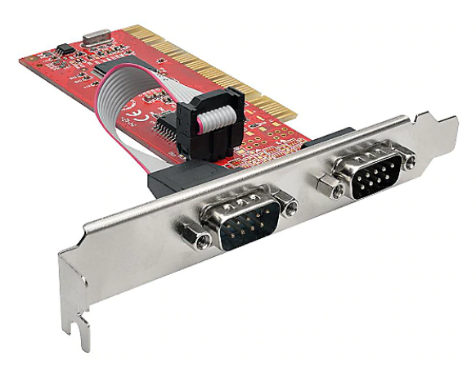
Figure 1

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0 0 0 0 

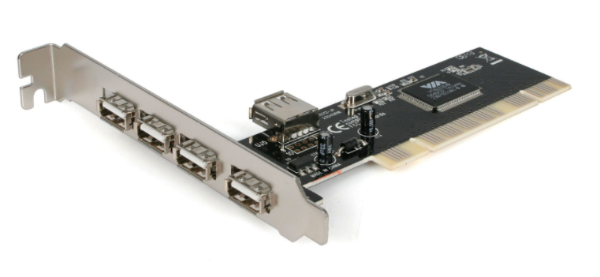
1. According to Figure 1, what type of port is labeled A?
   1. DVI
   2. RJ45
   3. Serial
   4. VGA
2. According to Figure 1, what type of port is labeled E?
   1. USB
   2. VGA
   3. Serial
   4. DVI

3. Which of the following PCI components will enable network access?

1. a.









1. Insulators should be at least \_\_\_\_ away from your workstation when working with ESD sensitive components.
   * 1. 6 inches
     2. 12 inches
     3. 18 inches
     4. 24 inches
2. Which command line tool is best used to test reachability of a host on an IP network?
   * 1. nslookup
     2. netstat
     3. ipconfig
     4. ping
3. After installing a new hard drive, what must you do to make it useable within Windows?
   * 1. Format the drive in Disk Management
     2. Format the drive in File Explorer
     3. Run checkdisk
     4. Run a defrag
   1. Which of the following is NOT a valid capacity for a single stick of RAM?
      1. 1 GB
      2. 2 GB
      3. 3 GB
      4. 4 GB
   2. What is the loopback address?
      1. 169.254.0.1
      2. 255.255.255.0
      3. 127.0.0.1
      4. 192.168.0.1
   3. What might be a consequence of changing your computer from BIOS to UEFI boot mode?
      1. The OS can't boot
      2. Hard drives larger than 2 TB become unusable
      3. Secure Boot becomes inaccessible
      4. All BIOS configuration settings are lost
   4. What type of cables do Ethernet RJ45 utilize?
      1. Twisted pair copper cables
      2. Coaxial cables
      3. Fibre optics cables
      4. Ribbon cables
   5. Which level of a CPU is the fastest cache memory?
      1. Level 1
      2. Level 2
      3. Level 3
      4. Level 4
   6. Which one of these is *not* a primary function of the Basic Input/Output System?
      1. Scans for a boot device and hands off to the best OS available.
      2. Checks the hardware health for any errors.
      3. Initializes firmware for the hardware devices.
      4. Scans the drive media for block errors.
4. Which of the following best describes Bitlocker?
   1. A Microsoft utility that encrypts memory access.
   2. A Microsoft utility that encrypts the GPU.
   3. A Microsoft utility that encrypts that data on a drive.
   4. None are correct.
5. What types of drives are supported in modern-day laptops?
   * 1. M.2
     2. PATA disk
     3. Tape drive
     4. AT-AT disk
   1. Which of these is true about SO-DIMM?
      1. SO-DIMM are most often used in enterprise level devices.
      2. SO-DIMM are specific keyed form factors that only fit on the motherboard slot in a one way.
      3. SO-DIMM, RDIMM, UDIMM, and LRDIMM are all interchangeable.
      4. None of these are true.
   2. Which of these supports drives larger than 2 TB?
      1. GPT
      2. MBR
      3. FAT32
      4. All are correct
   3. What tool could you use to check if a service has stopped running?
      1. Perfmon
      2. Task Manager
      3. msconfig
      4. Event Viewer
   4. What tool will allow you to change a service's startup type?
      1. Perfmon
      2. Task Manager
      3. Services
      4. msconfig
   5. What is Device Manager used for?
      1. Installing and updating applications
      2. Installing and updating programs
      3. Installing and updating drivers
      4. All are correct
   6. How can you add a website to your Trusted Sites?
      1. Control Panel > Internet Options > Privacy > Trusted Sites
      2. Control Panel > Network and Sharing Center > Security > Trusted Sites
      3. Control Panel > Network and Sharing Center > Privacy > Trusted Sites
      4. Control Panel > Internet Options > Security > Trusted Sites
   7. Which of the following is NOT available from Computer Management?
      1. Local Group Policy Editor
      2. Local Users and Groups
      3. Services
      4. Disk Management
   8. After installing an add-in graphics card, the computer no longer gets video. What could be the cause?
      1. The card's specs were too low to support modern games.
      2. The monitor is broken.
      3. The cable went bad.
      4. The cable is still plugged in to on-board graphics.
   9. What would the jumpers on the back of a SATA drive be used for?
      1. Setting whether a drive was used for OS or Data.
      2. Setting whether a drive was a primary or secondary drive.
      3. Setting whether a drive was full duplex or half.
      4. Setting whether a drive uses MBR or GPT.
   10. What setup option would you choose to perform a clean install of Windows?
       1. Upgrade
       2. Custom
       3. New
       4. Repair
   11. After installing Windows, some of your peripherals are not working. What should you check first?
       1. Install custom software and management applications.
       2. Install Windows Updates.
       3. Install device drivers.
       4. Buy new peripherals.
   12. A collection of previously released updates, fixes, security patches and enhancements that helps make Windows more reliable is called a \_\_\_\_\_\_\_.
       1. critical update
       2. security patch
       3. new version of Windows
       4. service pack
   13. Which tool will scan protected Windows files and replace any corrupted files with a cached copy?
       1. SFC
       2. Checkdisk
       3. Windows Update
       4. Safe Mode
   14. Which of the following can be installed or removed while the PC is turned on?
       1. RAM
       2. CPU
       3. GPU
       4. External Hard Drive
   15. As a Linux operator, how would you display the file and directory contents of your current directory?
       1. cd
       2. ls
       3. chmod
       4. grep
   16. In Linux, to access a file in another directory we must navigate to that directory. What command do we need to use?
       1. mkdir
       2. grep
       3. cd
       4. None of these are correct
   17. A user has forgotten their password to access their Linux system. What command would you use to alter the user's password?
       1. passwordchg
       2. passwd
       3. pw
       4. pwd
   18. You are an administrator of a Linux environment. One of the user systems you are working on requires you to have administrative access to the OS, but the user does not have administrative rights. What command can you use to circumvent this limitation?
       1. chmod
       2. sudo
       3. usrmod
       4. chown
   19. As a Windows administrator managing a Group Policy of workstation devices, what command would be best to use to apply updates to the group without rebooting the workstation?
       1. ipconfig
       2. defrag
       3. reboot
       4. gpupdate
   20. You are upgrading the hardware of a workstation in your environment with a larger hard drive. It is essential that this workstation be able to access the data from this drive as fast as possible. What speed HDD would you be able to select from available drives on the market?
       1. 7,200 rpm
       2. 100,000 rpm
       3. 15,000 rpm
       4. 150,000 rpm
   21. When setting up a wireless network for your office, what device would be best to support the most wireless end users possible?
       1. Access Point
       2. Managed Switch
       3. Router
       4. Network Hub
   22. Which service is responsible for translating character names to IP addresses and vice versa?
       1. DHCP
       2. SNMP
       3. DNS
       4. IPv4
   23. An end user requests your assistance with their workstation that will not power on. What would be the best step to begin troubleshooting this no power situation?
       1. Confirm the CMOS battery is properly seated on the motherboard.
       2. Remove all peripheral devices and PCIe devices and attempt to power up.
       3. Replace the power supply unit.
       4. Confirm the AC power outlet is working properly.
   24. You are configuring a setup for an end user to utilize a VOIP connection. The switch supports VOIP without the device needing its own external power. What is this feature called?
       1. QoS
       2. VLAN
       3. UDP
       4. PoE
   25. You are building a workstation that will specifically be used for virtualization. What are the most important hardware components to consider when building this workstation?
       1. A fast specialized GPU.
       2. A CPU with a high number of cores.
       3. Having lots of USB ports.
       4. Having a low memory capacity.
   26. Which of these options is one of the requirements to install Linux Ubuntu on a workstation?
       1. Confirm you have a network card installed in the workstation.
       2. Confirm you have a DVD or USB drive available with the version of Ubuntu you are installing.
       3. Confirm you have access to a command line guide to navigate within the terminal.
       4. Confirm you have a sound card installed in the workstation.
   27. An end user comes to you because they are unable to get their Windows workstation to print anything to the locally connected printer. You have confirmed the printer is working and the printer is available to the workstation. What would be the best next step to continue troubleshooting?
       1. Delete the printer drivers and install again.
       2. Install a known-good printer cable to the workstation and printer.
       3. Clear the print queue and restart the printing service.
       4. Replace the printer.
   28. What type of printer would be likely to give a "low toner" error?
       1. A black and white inkjet printer
       2. A laser printer
       3. A color inkjet printer
       4. A thermal printer
   29. Which of the following would NOT meet the minimum requirements to install Windows 10 32-bit?
       1. 1 GHz CPU
       2. 1 GB RAM
       3. 15 GB hard disk space
       4. 800 x 600 display
   30. Your system is running slowly, and you suspect it may be an issue with not having enough memory. What tool allows you to quickly view real time performance information?
       1. Task Manager
       2. Event Viewer
       3. Task Scheduler
       4. Device Manager
   31. What can cause a Windows Blue Screen error?
       1. Faulty hardware
       2. Bad device drivers
       3. Software errors
       4. All are correct
   32. After installing new device drivers, Windows is no longer able to boot. What would be your first step to troubleshoot this issue?
       1. Boot to Windows Recovery media
       2. Boot to Safe Mode
       3. Boot to Safe Mode with Networking
       4. Boot to Debug Mode
   33. Which of the following is NOT a safe place for an ESD-sensitive component?
       1. On top of an anti-static bag
       2. On top of a grounded anti-static mat
       3. In your hand while wearing a grounded anti-static wrist strap
       4. On top of anti-static foam
   34. What is the default file system used in Windows 10?
       1. FAT32
       2. FAT64
       3. NTFS
       4. NTFS64
   35. You suspect a user has unintentionally installed malware on their Windows PC. What will be your first step to remove the software?
       1. Run the setup.exe file for the software and select "uninstall"
       2. Select the software in Programs and Features and select "uninstall"
       3. Delete all files with the software name manually from within File Explorer
       4. Run an anti-virus scan on your computer
   36. You need to add a list of pre-approved websites to allow pop-ups in Microsoft Edge. What is the fastest way to accomplish this?
       1. Navigate to each web site and click the "pop up blocked" icon near the URL bar and select "always allow from this site".
       2. Navigate to Control Panel > Security > Pop-up Blocker > Settings
       3. In Edge select Settings > Cookies and site permissions > Pop-ups and redirects > Allow > Add
       4. In Edge select Settings > Privacy, search, and services > Pop-ups and redirects > Allow > Add