



COMPUTER REPAIR

Event Specifications

SCOPE OF CONTEST

The competition consists of three parts; PC benchmark, a written test, and PC configuration.

NUMBER OF COMPETITORS

Group event (2 members), limited to 10 groups/20 total competitors. Two groups per school site.
Fresno ROP reserves the right to modify enrollment due to limited spaces available.

RULES AND PROCEDURES

1. There will be an orientation session for all contestants and advisors at the beginning of the competition.
2. The competition will be split into three parts:
 - PC Benchmark
Contestants will be asked to identify several items on a specific computer based on a benchmark list handed out at the beginning of the competition. Points will be awarded based on accuracy of information.
 - Written Test
Contestants will be given a timed written test with questions related to A+ certification. (*see Computer Repair Study Questions*)
 - PC Configuration
Web Exercise

JUDGING CRITERIA

Contestants will be judged on accuracy of PC benchmark, written test and the web exercise.

EQUIPMENT AND MATERIALS

1. Supplied by the contestant:
 - a. Tool kits
 - b. ESD wrist straps
 - c. Wire testers
2. Supplied by the Career Skills Challenge:
 - a. Scantrons for A+ test
 - b. 10 computers
 - c. #2 pencils

COMPUTER REPAIR STUDY QUESTIONS

True/False

Indicate whether the statement is true or false.

1. Parallel ATA, sometimes called the EIDE (Enhanced IDE) standard or the IDE standard, is slower than SATA.
2. Some very basic instructions are stored on the motherboard—just enough to start the computer, use some simple hardware devices such as a monitor and keyboard, and search for an operating system stored on a storage device such as a hard drive or CD.
3. An operating system manages hardware, runs applications, provides an interface for users, and stores, retrieves, and manipulates files.
4. The kernel provides a way for the user to do such things as select music to burn to a CD, install an application, or change the wallpaper on the Windows desktop.
5. When working with a customer, your primary job is to satisfy your boss.
6. A help-desk call is the most difficult situation to handle when a customer is not knowledgeable about how to use a computer.
7. The support technician decides when the work is done.
8. The easiest way to fix a power supply you suspect is faulty is to replace it.
9. The motherboard configuration stored in BIOS setup needs to be changed when a new floppy drive is installed.
10. Electronic devices are more likely to fail than fans.
11. Systems using RIMMs are still being made.
12. To judge how far to insert the optical drive in the bay, align it with the back of the case.
13. Microsoft offers 64-bit versions for all Vista retail editions.
14. Windows needs free space on the hard drive for normal operation, for defragmenting the drive, for burning CDs and DVDs, and for a variety of other tasks, so it's important to delete unneeded files occasionally.
15. If Driver Verifier runs for a few days and has still not found the problem, it probably will not help you.
16. The Telnet protocol encrypts transmitted data, which therefore cannot be read by others on the network.
17. When you are responsible for the security of a computer or small network, make it a habit to check every computer for which you are responsible every day.
18. Allowing users full control of a folder is always required by job requirements.
19. A tablet PC has more features than a notebook, including a touch screen that also allows you to handwrite on it with a stylus.
20. In a notebook, replacing the motherboard probably means you'll need to fully disassemble the entire notebook except the LCD assembly.

Multiple Choice

Identify the choice that best completes the statement or answers the question.

21. A(n) _____ is software that controls a computer.
 - a. application
 - b. operating system
 - c. interface routine
 - d. ROM routine

22. In 1986, ____ was introduced and quickly became the most popular OS among IBM computers and IBM-compatible computers using the Intel 8086 processors.
- a. MS-DOS
 - b. Windows
 - c. OS/2
 - d. CPM
23. A(n) ____ is a program that runs in the background to support or serve Windows or an application.
- a. interface
 - b. slave
 - c. daemon
 - d. service
24. The ____ dialog box in Windows Vista appears each time a user attempts to perform an action that can be done only with administrative privileges.
- a. User Account Confirmation
 - b. User Account Control
 - c. User Access Control
 - d. User Access Confirmation
25. ____ has industry recognition, so it should be your first choice for certification as a PC technician.
- a. Security+ Certification
 - b. Network+ Certification
 - c. Hardware+ Certification
 - d. A+ Certification
26. To provide good service, you need to have a good ____ when servicing customers on the phone or online, on site, or in a shop.
- a. instincts
 - b. plan
 - c. script
 - d. phone voice
27. Troubleshooting begins by ____.
- a. assessing the computer
 - b. interviewing the user
 - c. reading the work order
 - d. understanding the procedure
28. The best way to give bad news is ____.
- a. email
 - b. face to face
 - c. telephone
 - d. text message
29. Motherboards that support PCI Express and have the 24-pin P1 connector are sometimes called ____ boards.
- a. Advanced ATX
 - b. Modified ATX
 - c. Micro ATX
 - d. Enhanced ATX
30. One ____ is the work or energy required to produce one watt of power in one second.
- a. Volt
 - b. joule
 - c. Ohm
 - d. Watt
31. Older hard drives use a(n) ____-conductor IDE ribbon cable.
- a. 20
 - b. 40
 - c. 60
 - d. 80
32. A system might have up to ____ types of ribbon cables.
- a. two
 - b. three
 - c. four
 - d. five
33. A(n) ____ might solve the problem of intermittent errors caused by noise in the power line to the PC.
- a. uninterruptible power supply
 - b. line cleaner
 - c. line manager
 - d. line conditioner

34. The process of upgrading or refreshing the ROM BIOS chip is called ____ BIOS.
- a. flashing
 - b. flushing
 - c. refurbishing
 - d. cloning
35. The most popular method of cooling overclocked processors is a(n) ____.
- a. air boosted system
 - b. peltier system
 - c. liquid cooling system
 - d. heat pipe system
36. DIMMs intended to be used in servers must be extremely reliable and use an error-checking technology called ____.
- a. CRC
 - b. ECC
 - c. AES
 - d. DPD
37. A Rambus memory module is called a(n) ____.
- a. RIMM
 - b. DIMM
 - c. SIMM
 - d. RDIMM
38. In the table found in the motherboard manual, a chip on a RIMM module is called a ____.
- a. tool
 - b. gadget
 - c. widget
 - d. component
39. When installing the RIMM, ____ on the edge of the RIMM module will help you orient it correctly in the socket.
- a. vents
 - b. colors
 - c. notches
 - d. symbols
40. The top and bottom of each disk of a magnetic hard drive have a(n) ____ that moves across the disk surface as all the disks rotate on a spindle.
- a. read head
 - b. read/write head
 - c. access head
 - d. platter device
41. With ____, you can connect and disconnect a drive while the system is running.
- a. wet-swapping
 - b. cold-swapping
 - c. hot-swapping
 - d. block-swapping
42. With ____, two hard drives are configured as a single volume.
- a. binding
 - b. bonding
 - c. spanning
 - d. wrapping
43. If you are mounting a hard drive into a bay that is too large, a ____ kit can help you securely fit the drive into the bay.
- a. reversal bay
 - b. drive connecting
 - c. universal bay
 - d. bay adapter
44. After the sound is recorded and digitized, many sound cards convert and compress the digitized sound to ____ format.
- a. MP3
 - b. AU
 - c. WAV
 - d. AIF
45. ____ drives are a great method of keeping backups of data stored on your hard drive.
- a. External hard
 - b. External optical
 - c. Internal optical
 - d. External floppy

46. To prevent a CD, DVD, or BD from automatically playing when AutoPlay is enabled, hold down the ____ key when inserting a disc.
- a. Control
 - b. Escape
 - c. F Lock
 - d. Shift
47. When burning a CD, DVD or BD, the hard drive needs some temporary holding space for the write process and should have at least ____ of free space.
- a. 1 MB
 - b. 2 MB
 - c. 1 GB
 - d. 2 GB
48. User manuals and ____ for a device or software often list symptoms of problems with possible solutions and troubleshooting tips.
- a. reference manuals
 - b. operational manuals
 - c. installation manuals
 - d. run books
49. Good ____ helps you take what you learned into the next troubleshooting situation, train others, develop effective preventive maintenance plans, and satisfy any audits or customer or employer queries about your work.
- a. procedures
 - b. documentation
 - c. memory
 - d. communications skills
50. The ____ partition is the active partition of the hard drive.
- a. system
 - b. data
 - c. recovery
 - d. logical
51. Product ____ is a method used by Microsoft to prevent unlicensed use of its software so that you must purchase a Windows license for each installation of Windows.
- a. activation
 - b. entitlement
 - c. enablement
 - d. installation
52. When a hard drive is first sensed by Windows, it is assigned the ____ disk status.
- a. Primary
 - b. Dynamic
 - c. Automatic
 - d. Basic
53. A disk marked as dynamic can be used with other dynamic disks in a spanned or ____ volume.
- a. blocked
 - b. checkered
 - c. striped
 - d. lined
54. To make sure that all hardware or software installed on the system is compatible with Windows Vista, use the ____.
- a. Vista Upgrade Toolkit
 - b. Vista Upgrade Advisor
 - c. Vista Crossgrade Advisor
 - d. Vista System Advisor
55. Use the Windows Vista ____ tool to deal with an immediate hardware or software problem.
- a. Help and Support
 - b. Help and Problems Solutions
 - c. Problem Reports and Solutions
 - d. Problem Solutions
56. The Vista Advanced Boot Options menu appears when a user presses ____ as Vista is loading.
- a. F2
 - b. F4
 - c. F8
 - d. F12
57. To retrieve the command entered in the Recovery Console one character at a time, press the ____ key.
- a. F1
 - b. F2
 - c. F3
 - d. F4

58. The command ____ searches for and replaces corrupted system files.
- a. sfc /scan /now
 - b. sfc /scannow
 - c. sfc /now /sfscan
 - d. svc /now /sfscan
59. For almost all networks today, including the Internet, the communication protocol used is called ____.
- a. TCP/IP
 - b. UDP
 - c. OSI
 - d. HTTP
60. The ____ for a cellular network is a fixed transceiver and antenna.
- a. mobile station
 - b. intermediate station
 - c. base station
 - d. reference station
61. The ____ command can display TCP/IP configuration information and refresh the IP address.
- a. msconfig
 - b. netcnfg
 - c. ipconfig
 - d. netcfg32
62. To prepare a computer to serve up Remote Desktop, you need to configure the computer for ____ IP addressing.
- a. dynamic
 - b. learned
 - c. static
 - d. comparative
63. Networking happens in ____.
- a. flows
 - b. layers
 - c. patterns
 - d. tides
64. When setting up a VoIP system, know that each digital phone or ATA must be programmed with a phone number from the ____.
- a. VoIP provider
 - b. ISP
 - c. Network administrator
 - d. Service Center
65. A(n) ____ account has complete access to the system and can make changes that affect the security of the system and other users.
- a. service
 - b. administrator
 - c. privileged
 - d. user
66. Most hard drive manufacturers offer a ____ used to wipe clean all data on the drive.
- a. partition utility
 - b. diagnostic utility
 - c. cloning utility
 - d. zero-fill utility
67. Windows XP uses ____ file sharing by default, which means you have no control over who has access to a shared folder or file.
- a. network
 - b. simple
 - c. directory
 - d. user
68. The ____ command can be used to encrypt, decrypt, or recover an encrypted file when the certificates are lost.
- a. Decipher
 - b. Cipher
 - c. Decode
 - d. Transcode
69. For a stand-alone computer that is not part of a Windows domain, the EFS encrypting process generates a ____ digital certificate to be used for the encryption.
- a. publicly-signed
 - b. network-signed
 - c. system-signed
 - d. self-signed

70. In a laser printer, the fuser should last for about ____ pages.
- | | | | |
|----|------|----|---------|
| a. | 450 | c. | 45,000 |
| b. | 4500 | d. | 450,000 |

CAREER SKILLS CHALLENGE

SCORE SHEET

COMPUTER REPAIR

Student Name: _____

School/District: _____

	Possible Points	Points Scored	Additional Comments
PC Benchmark			
Written Test			
PC Configuration-Web Exercise			
TOTALS			

Please distribute evaluation copies to:

Contestant
White

Event Manager
Yellow