

THE DLS TECHNICIAN'S CERTIFICATE III

CHAPTER AT A GLANCE

Why Bother with a Certificate? 1923

What It Costs 1924

But I'm No Good at Tests 1924

Test Instructions 1924

Making the Grade 1925

Exam Questions 1925

The certification of technical knowledge serves several important goals. It gives the persons being certified an opportunity to review and tie together all of the important ideas they have learned during their studies. Successful certification also demonstrates proficiency in the subject area to employers and customers. There are many different approaches to education and certification in the PC industry. Most involve off-site testing or training to some extent, although many firms provide very good home-study PC courses.

The problem with most educational courses is that they are terribly expensive for the PC enthusiast or entry-level technician. This book has been designed to serve both as a practical reference text and as a learning tool. The all-new 300-question *DLS Technician's Certificate III* allows you to test your understanding of the topics covered in this edition of the book and provides you with a printed certificate upon successful completion of this "final" examination.

Why Bother with a Certificate?

The big complaint about certificates is that they are "*just pieces of paper*"—frame them, hang them on a wall, dust them off from time to time...big deal. Fortunately, there are some *very real* incentives to shoot for the *DLS Technician's Certificate III*. First, the certificate offers something for everyone—novices have an inexpensive means to enhance their knowledge (and perhaps build a bridge to that new career). Veteran troubleshooters can use this test to check their knowledge and keep important skills up to date.

Any professional will tell you that up-to-date skills are a key to long-term employability. Also, the exam is an *excellent* way to prepare for the industry-recognized A+ and CST exams.

What It Costs

There is a one-time test processing fee of \$50.00 (US) to offset the administrative cost of grading, printing, and mailing. If you *pass* the test, you will receive a *Certificate of Completion* (suitable for framing). If you should fail the test for any reason, you will be informed of your grade in writing, and a new set of information/answer sheets will be sent to you. You may then take the test again as often as you like at *no additional cost*.



Dynamic Learning Systems observes a “global pricing policy” for this exam, so the fee is only \$50.00 (US) regardless of where you are. However, the exam fee must be paid in US dollars, or by credit card.

But I’m No Good at Tests

Fair enough—that’s true for a lot of people—but there’s no reason to feel bad. So before you say “I can’t do that” and close this Appendix, try completing the *DLS Technician’s Certificate III* exam—it can be surprisingly painless. Go ahead and give it a try. Just consider some of the following points:

- *There is no pressure—work at your own pace.* You’re not being timed here, so you’re free to take the exam on your own schedule when *you* are ready.
- *There are no time limits.* You can take as long as you need to finish the exam—spread it out over a weekend or several weeks—even several months—whatever your time permits.
- *You don’t have to cram—the exam is open-book.* Purists might criticize this as an unfair advantage, but the answers do not come *directly* from the book. Besides, how many professionals out there know everything there is without having to refer to a book or magazine at one time or another?
- *You can’t lose money.* Since there is only a one-time fee, you can retake the test as many times as you need to in order to pass.

Test Instructions

Taking the exam is very easy. Just follow the steps outlined below, and you should have no problems at all:

1. Print out the *Information Cover Sheet* and all pages of the *Answer Sheet*.
2. Photocopy the information and answer sheets and use the photocopied pages to complete the test (keep the original pages tucked away).
3. Start the test at Question #1.
4. Fill in your answers by *carefully* circling or blacking-in the desired letter using a #2 pencil. Although you can use marker or pen as well, pencil is *strongly* recommended because it can be erased completely. *Remember:* answers with more than one letter circled or blacked out must be marked *incorrect*.

5. Answer *all* 300 questions. You can answer them in *any* order, but you should remember to answer them all. Unanswered questions will be marked incorrect. Be sure to double-check your answers before submitting the exam.
6. When all questions have been completed, and you're satisfied with the answers, fill out the *Information Cover Sheet*. The information must be filled out *entirely* so that you receive your credit.
7. Send the completed *Information Cover Sheet* and *Answer Sheets* with payment to Dynamic Learning Systems. Do *not* submit the question pages.
 - If you are paying by check, mail the forms and check or money order to:
Dynamic Learning Systems, PO Box 402, Leicester, MA 01524-0402
 - If you are paying by credit card, you can mail the forms, or fax them to:
508-892-1482

Your exam will be promptly graded, and you will receive a reply within four weeks. If you have questions or trouble understanding the instructions listed above, contact *Customer Service* at 508-892-1475. Best of luck to you!

Making the Grade

So, how do you pass? You need a 70 percent or higher score to *pass* the exam. With 300 questions, you will need to answer 210 questions correctly. The official grade is strictly “pass or fail”—there will be no letter grade assigned (though we usually note a letter equivalent for your reference).

Exam Questions

The 300 questions comprising the DLS Technician's Certificate III are presented below. Please mark your answers on the Answer Sheets *only*—there is no need for you to mark up or submit the question. The answer sheets can be found at the end of this appendix.

1. A *motherboard* is **NOT** known as...
 - a. a main board
 - b. a central board
 - c. a system board
 - d. a backplane board
2. What is the primary purpose of an *enclosure*?
 - a. to enhance the system's cosmetic appearance
 - b. to vent excess heat from the system
 - c. to serve as a physical and electrical chassis for the system
 - d. to improve processing performance

3. Power supply capacity is rated in terms of...
 - a. ohms
 - b. volts
 - c. amps
 - d. watts
4. When you have a floppy drive, CD-ROM, or any drive where media must be inserted or removed, that drive **MUST** be mounted/installed...
 - a. in an external drive bay
 - b. in an internal drive bay
 - c. in a replaceable drive bay
 - d. in a covered drive bay
5. What is the easiest way to determine the presence of a SCSI host adapter in your system?
 - a. disassemble the PC and locate the SCSI host adapter card
 - b. check the settings of your system's CMOS Setup routine
 - c. observe the monitor at boot time and look for the SCSI BIOS identification string
 - d. flash the system BIOS
6. What is the single most handy procedure that you can perform after making a backup?
 - a. rewind the tape and remove it from the drive
 - b. retention the tape and remove it from the drive
 - c. store the tape in its protective container
 - d. run a "verify" operation to check the integrity of the backup
7. An ATX/NLX power supply fan is typically rated for what air volume?
 - a. 23cfm
 - b. 15cfm
 - c. 40cfm
 - d. 30.3cfm
8. Which of the following is not part of a monitor assembly...
 - a. the CRT
 - b. the video information board
 - c. the raster drive board
 - d. the power supply
9. How many electron guns are housed in a typical color CRT?
 - a. one
 - b. three
 - c. five
 - d. nine

10. The thin plate of metal in a CRT that contains thousands of microscopic perforations is called...
 - a. the pixel mask
 - b. the color mask
 - c. the electron mask
 - d. the shadow mask
11. The device inside a monitor that is used to keep the shadow mask demagnetized is called...
 - a. the flyback transformer
 - b. the horizontal output transistor
 - c. the electron gun
 - d. the degaussing coil
12. A monitor's high-voltage is developed by...
 - a. the horizontal drive circuit
 - b. the power supply
 - c. the CRT grid voltage circuit
 - d. the color adjustment circuit
13. Which of the selections below is *not* part of the PC hierarchy?
 - a. the CMOS
 - b. the hardware
 - c. the operating system
 - d. the application(s)
14. DOS commands which must be loaded from the disk and executed each time they are needed are referred to as:
 - a. resident commands
 - b. transient commands
 - c. utility commands
 - d. operating commands
15. What is the file name of the DOS shell and command line processor?
 - a. IO.SYS
 - b. MSDOS.SYS
 - c. COMMAND.COM
 - d. CONFIG.SYS
16. What is the very first step in a typical PC boot process?
 - a. the motherboard receives a "power good" signal from the power supply
 - b. the CPU fetches an instruction from address FFFF:0000h
 - c. the BIOS checks memory and executes its sequence of POST routines
 - d. none of the above

- 17.** If the BIOS cannot verify the checksum of the video ROM, what is a typical error message that you'll see?
- a.** XXXX ROM Error
 - b.** C000 ROM Error
 - c.** Diskette boot record error
 - d.** No boot device available
- 18.** If the final two bytes of the master partition boot sector are not 55h and AAh, you'll probably see what error message?
- a.** XXXX ROM Error
 - b.** C000 ROM Error
 - c.** Diskette boot record error
 - d.** No boot device available
- 19.** Which of the following are NOT part of the "universal troubleshooting procedure"?
- a.** define your symptoms
 - b.** contact technical support
 - c.** identify and isolate
 - d.** replace the suspect assembly
- 20.** Benchmarks will NOT help you to evaluate...
- a.** system comparisons
 - b.** upgrade improvements
 - c.** diagnostic assessment
 - d.** monitor operations
- 21.** What common symptom generally does not suggest the possible presence of a computer virus?
- a.** the power supply fails
 - b.** file sizes change
 - c.** odd messages appear on the monitor
 - d.** unusually high amount of file access
- 22.** What should you do with an anti-virus diskette when a virus has been found and removed?
- a.** return the diskette to service
 - b.** destroy the diskette
 - c.** make more anti-virus diskettes from the successful disk
 - d.** put the diskette aside for further analysis
- 23.** A system starts but won't initialize. The power light is on and you hear two or more beeps. What's the **first** item to check if there is no video?
- a.** check the video card
 - b.** check the drive signal cables
 - c.** check the power supply connections at the motherboard
 - d.** check the BIOS chip

24. You install a new device and the system fails to recognize it. You may **first** need to...
- a. replace the defective device
 - b. install the drivers/software for that device
 - c. run a diagnostic to check the system
 - d. upgrade the motherboard BIOS to support the device
25. Effective backup strategies must first include a consideration of...
- a. the age of the system
 - b. the backup frequency
 - c. the operating system
 - d. the Internet connection
26. Which tape rotation strategy is generally considered most appropriate for SOHO use?
- a. two tape rotation
 - b. three tape rotation
 - c. six tape rotation
 - d. ten tape rotation
27. When backing up for disaster preparation, where should the backup(s) best be stored?
- a. as close to the backed up system as possible
 - b. as far from the backed up system as possible
 - c. in a metal container somewhere on-site
 - d. in a fire-proof safe/cabinet in a secure off-site location
28. When you encounter poor backup performance under Windows 95, you should **first** check...
- a. the backup drive connections to your system
 - b. your available memory in the system
 - c. the age of the backup tape(s)
 - d. the version of Backup that's being used.
29. When you encounter a "media error" while backing up under Windows 98, chances are that the tape drive might *not* support...
- a. QIC
 - b. Travan
 - c. QFA
 - d. minicartridges
30. If you have trouble formatting a tape, you should **first** check...
- a. the drive connections
 - b. the tape drive's device drivers
 - c. the tape standard and compatibility
 - d. the tape drive's ID

- 31.** A non-rechargeable battery is known as a...
- a.** primary cell
 - b.** secondary cell
 - c.** tertiary cell
 - d.** lithium cell
- 32.** What is the most important system consideration when replacing a CMOS backup battery?
- a.** clean the battery contacts before installing the new cell
 - b.** turn the PC power off and disconnect the line cord before removing the old cell
 - c.** be careful not to damage the battery holder when removing the old cell
 - d.** record the system's CMOS settings so they're not lost when the old cell is removed
- 33.** When you see a "*system configuration error*" at start time, you should **first** check to see...
- a.** that the CMOS backup battery is installed properly
 - b.** that the CMOS Setup is configured properly
 - c.** that the CMOS RAM chip is installed securely
 - d.** that the CMOS CLR jumper is set in the "protected" position
- 34.** How should a new battery pack be prepared for service?
- a.** it should be inserted and removed from the system at least several times
 - b.** it should be heated and cooled in the system at least several times
 - c.** it should be shorted until the battery pack is completely dead
 - d.** it should be fully charged and discharged ("cycled") several times
- 35.** The rechargeable battery phenomenon where you cannot get reasonable life from a full charge is known as...
- a.** the "suspend" effect
 - b.** the "hibernation" effect
 - c.** the "memory" effect
 - d.** the "shutdown" effect
- 36.** A typical BIOS occupies how much memory space in the UMA?
- a.** 256KB
 - b.** 32KB
 - c.** 512KB
 - d.** 128KB
- 37.** When checking the banner for an AMI BIOS, the second set of four characters represents...
- a.** the BIOS release date
 - b.** the BIOS revision number
 - c.** the BIOS POST result
 - d.** the BIOS customer (OEM) reference code

- 38.** BIOS bugs are most easily corrected by...
- a.** replacing the BIOS chip
 - b.** installing a TSR that will correct the deficiency
 - c.** replacing the motherboard outright
 - d.** “flashing” the BIOS with a new firmware version
- 39.** A BIOS “checksum” error typically means that...
- a.** the BIOS code on the chip has become corrupted
 - b.** the BIOS code is conflicting with a driver or TSR
 - c.** the BIOS code needs to be updated to a later version
 - d.** the BIOS code is operating properly
- 40.** When the BIOS POST warns of a “*diskette subsystem reset failure*”, chances are **best** that...
- a.** the BIOS chip has failed
 - b.** the diskette controller has failed
 - c.** the operating system will not load
 - d.** the diskette that you’re using is defective
- 41.** The maximum clock speed on an ISA bus is...
- a.** 8.3MHz
 - b.** 12MHz
 - c.** 25MHz
 - d.** 33MHz
- 42.** The EISA bus architecture is backward-compatible with...
- a.** PCI cards
 - b.** VL bus cards
 - c.** ISA cards
 - d.** AGP cards
- 43.** When adding, upgrading, or moving an EISA device, you’ll need to...
- a.** set priority jumpers on each EISA device
 - b.** run an EISA Configuration Utility
 - c.** run the system’s CMOS Setup
 - d.** change the loading order of your EISA drivers
- 44.** The PCI bus runs at a clock speed of...
- a.** 8.3MHz
 - b.** 12MHz
 - c.** 25MHz
 - d.** 33MHz

45. What is the **easiest** means of dealing with a defective bus slot?
- a. replace any broken pins in the connector
 - b. block the slot and use a different one instead
 - c. replace the damaged bus slot connector
 - d. replace the motherboard outright
46. A typical compact disc (CD) holds up to...
- a. 600MB
 - b. 623MB
 - c. 650MB
 - d. 705MB
47. The current standard that defines recordable (CD-R) drives is...
- a. Red book
 - b. Orange book
 - c. Blue book
 - d. White book
48. When you see a "wrong DOS version" error, chances are that you're...
- a. running the wrong version of COMMAND.COM
 - b. running the wrong version of MSCDEX.EXE
 - c. running the wrong CD-ROM driver version
 - d. running the wrong BIOS version
49. When a drive door refuses to open once a signal cable is attached, you should **first** check...
- a. the drive's power cable
 - b. the drive's signal cable
 - c. the drive's controller
 - d. the disc in the drive
50. When a CD-R drive's on-board memory empties during a write operation, that is known as...
- a. a buffer underrun
 - b. a buffer overrun
 - c. a buffer flush
 - d. a buffer failure
51. When selecting a motherboard, the item that most effect the motherboard's feature set is...
- a. the CPU
 - b. the RAM
 - c. the chipset
 - d. the form factor

- 52.** Which of the following companies do NOT produce PC chipsets?
- a.** Intel
 - b.** Microsoft
 - c.** VIA
 - d.** SiS
- 53.** Intel produces which family of chipsets?
- a.** the 750 set
 - b.** the 440BX set
 - c.** the Apollo Pro set
 - d.** all of the above
- 54.** VIA produces which family of chipsets?
- a.** the 750 set
 - b.** the 440BX set
 - c.** the Apollo Pro set
 - d.** all of the above
- 55.** The most effective means of upgrading a chipset to expand a system's capabilities is to...
- a.** upgrade the motherboard
 - b.** upgrade the BIOS
 - c.** upgrade the CPU
 - d.** upgrade the RAM
- 56.** The CMOS is basically...
- a.** a key part of the PC's processing architecture
 - b.** a small amount of low-power static RAM
 - c.** a small amount of low-power dynamic RAM
 - d.** a small amount of SDRAM
- 57.** A typical key sequence used to start the CMOS Setup of a Phoenix BIOS would be...
- a.** DEL key during the POST
 - b.** CTRL+ALT+INS after CTRL+ALT+DEL
 - c.** hit F10
 - d.** CTRL+ALT+ESC
- 58.** When your CMOS Setup contents are lost (and not recorded anywhere), you may be able to resume operation by...
- a.** replacing the motherboard outright
 - b.** flashing the motherboard's BIOS
 - c.** loading the BIOS Default settings in the CMOS Setup
 - d.** using FDISK to repartition the hard drive(s)

- 59.** If you cannot enable APM/ACPI power management under Windows 95/98, chances are that...
- a.** you have a corrupt installation of Windows 95/98
 - b.** your APM/ACPI features have been disabled in the CMOS Setup
 - c.** your BIOS is defective and should be upgraded/replaced
 - d.** the CMOS backup battery has failed and should be replaced
- 60.** When the RTC fails to keep the proper time while the system is off, chances are that...
- a.** you have a corrupt installation of Windows 95/98
 - b.** your APM/ACPI features have been disabled in the CMOS Setup
 - c.** your BIOS is defective and should be upgraded/replaced
 - d.** the CMOS backup battery has failed and should be replaced
- 61.** The CPU's attention can be obtained by asserting which type of signal?
- a.** an interrupt (IRQ)
 - b.** an I/O address
 - c.** a DMA channel
 - d.** none of the above
- 62.** What is the principal advantage of DMA?
- a.** data can be transferred without direct intervention of the CPU
 - b.** devices can be configured automatically each time the computer starts
 - c.** multiple devices can share DMA channels and alleviate resource conflicts
 - d.** none of the above
- 63.** I/O space serves what general purpose on a device?
- a.** it allows the device to signal the system processor for immediate service
 - b.** it allows data and commands to be exchanged between the device and the system
 - c.** it reduces (or eliminates) the need for interrupt and DMA signals
 - d.** it allows a device to be configured automatically
- 64.** Which of the following symptoms do NOT suggest the possibility of a hardware/software conflict?
- a.** the system locks up during the POST or operating system initialization
 - b.** the system locks up during a particular application
 - c.** the system locks up when a particular device (i.e. a TWAIN scanner) is used
 - d.** none of the above
- 65.** *Device Manager* error "Code 4" means what?
- a.** "Another device is using the resources this device needs"
 - b.** "This device is not working properly because one of its drivers may be bad, or your registry may be bad"
 - c.** "This device is either not present, not working properly, or does not have all the drivers installed"
 - d.** "The drivers for this device need to be reinstalled"

66. The CPU rating system which equates AMD/Cyrix processors to Intel processors is called...
- a. the SysOpt rating system
 - b. the iCOMP rating system
 - c. a “benchmark”
 - d. the P-rating (PR) system
67. A Pentium II/III processor requires which type of motherboard connection?
- a. Slot A
 - b. Slot 1
 - c. Slot 2
 - d. Socket 370
68. Intel’s new architecture intended to accelerate 3D and other multimedia processing is called...
- a. 3DNow
 - b. MMX
 - c. SSE
 - d. MPC
69. The practice of driving a processor beyond its tested/rated speed is generally known as...
- a. overclocking
 - b. underclocking
 - c. clock-doubling
 - d. superscalar processing
70. What typical issue were Cyrix 6x86 processors particularly noted for?
- a. excessive cache utilization
 - b. excessive heating
 - c. excessive floating point failures
 - d. excessive cost
71. When a system starts but crashes frequently after installing a new processor, you should **first** check...
- a. the processor’s orientation in the slot/socket
 - b. the processor’s heat sink/fan or other cooling unit
 - c. the processor’s retention mechanism
 - d. the processor’s configuration in the CMOS Setup
72. What system setting should you NOT be concerned about when upgrading a processor?
- a. the L2 cache setup
 - b. the processor voltage
 - c. the processor’s bus clock
 - d. the processor’s clock multiplier

- 73.** What are NOT some common causes of data loss?
- a.** hardware or system failures
 - b.** human error
 - c.** memory diagnostics
 - d.** computer viruses
- 74.** What is the easiest means of recovering files and folders under Windows 95/98?
- a.** use the Device Manager
 - b.** use the Windows Explorer
 - c.** use the Active Desktop
 - d.** use the Recycle Bin
- 75.** The best tool to check for file system damage, lost clusters, and cross-linked files would be...
- a.** Disk Defragmenter
 - b.** System Information
 - c.** ScanDisk
 - d.** Backup
- 76.** What command syntax would you use to recover a failed master boot record?
- a.** MIRROR /PARTN
 - b.** UNFORMAT /PARTN
 - c.** FDISK /MBR
 - d.** FORMAT C: /S
- 77.** When your data recovery software stops and the system hangs up or crashes, it may be that...
- a.** the data recovery software is buggy and must be updated
 - b.** there is insufficient disk space on the drive that's receiving the recovered files
 - c.** there is insufficient conventional/extended RAM in the system
 - d.** the disk has failed and must be replaced
- 78.** The process of locating repetitive sequences of data and replacing them with smaller "token" is known as...
- a.** data compression
 - b.** field compensation
 - c.** bus timing
 - d.** none of the above
- 79.** On a compressed drive, the CVF is usually located on
- a.** the D: drive
 - b.** the C: drive
 - c.** the F: drive
 - d.** the H: drive

- 80.** What is the **first** procedure that you should perform before installing compression on a drive?
- a.** defragment the drive
 - b.** run ScanDisk
 - c.** check conventional RAM
 - d.** create a bootable diskette
- 81.** Optimizing a drive for “space” requires that you...
- a.** uninstall the drive overlay software
 - b.** set the compression software for standard compression
 - c.** set the compression software for minimum/no compression
 - d.** upgrade the compression utility
- 82.** When you receive an error such as “the decompression of %s failed”, chances are that...
- a.** the \Windows\Temp folder is missing or damaged
 - b.** the \Windows\System folder is missing or damaged
 - c.** one or more files in the \Windows folder is damaged
 - d.** the decompression driver is corrupted
- 83.** What is the official “standard” for Ultra-DMA/66?
- a.** ATA
 - b.** ATA-2
 - c.** ATA-3
 - d.** ATA-4
- 84.** Describe the signal cable used to connect an Ultra-DMA/66 drive and controller.
- a.** 40-pin/40-conductor
 - b.** 34-pin/34-conductor
 - c.** 40-pin/80-conductor
 - d.** 68-pin/68-conductor
- 85.** Ultra-DMA/66 hard drives can achieve burst data transfer rates up to...
- a.** 16MB/s
 - b.** 66MB/s
 - c.** 33MB/s
 - d.** 40MB/s
- 86.** Level-1 RAID (“Raid 1”) is also known as...
- a.** mirroring
 - b.** striping
 - c.** sparing
 - d.** spanning

- 87.** In order for a drive controller to support a drive over 512MB, you must configure the CMOS Setup to enable...
- a.** CHS
 - b.** LBA
 - c.** IDE
 - d.** ZIP
- 88.** If you notice that drive performance is poor and data transfer rates seem slow, you should **first**...
- a.** the drive's signal cable
 - b.** the drive's geometry in the CMOS Setup
 - c.** try disabling anti-virus software on the system
 - d.** try reversing the drive's "master/slave" relationship
- 89.** A DVD-ROM disc can hold up to...
- a.** 8GB
 - b.** 12GB
 - c.** 17GB
 - d.** 25GB
- 90.** The technology that restricts the playback area of a DVD-Video is known as the...
- a.** region code
 - b.** playback code
 - c.** release code
 - d.** version code
- 91.** What file format is used with DVD-ROM drives?
- a.** High Sierra
 - b.** ISO9660
 - c.** UDF
 - d.** MPEG
- 92.** If a DVD-ROM drive refuses to install, your **first** step should be to...
- a.** check the DVD-ROM's .INF file
 - b.** remove and reinstall the DVD-ROM drive
 - c.** replace the DVD-ROM drive with another model
 - d.** remove the DVD-ROM drive and try installing the software first
- 93.** When your DVD software indicates that "video and audio glitches may occur", you should...
- a.** replace the DVD-ROM drive with another model
 - b.** rerun the DVD-ROM drive's Setup procedure
 - c.** remove the DVD-ROM drive and try installing the software first
 - d.** try another DVD disc

- 94.** When a “softDVD” player indicates “card required”, chances are **best** that...
- a.** the DVD-ROM drive is defective
 - b.** the MPEG-2 decoder card is defective
 - c.** the system does not meet the minimum requirements for the software player
 - d.** there is insufficient memory in the system, or the memory is defective
- 95.** If the DVD-Video picture starts to “pixelize” or “break apart”, you should **first**...
- a.** return the defective DVD-Video disc
 - b.** reinstall the DVD-ROM drive’s video player software
 - c.** change the video system’s refresh rate
 - d.** try cleaning the DVD-Video disc
- 96.** Which of the major parameters below will **NOT** have a major impact on system performance?
- a.** system resources
 - b.** file system
 - c.** virtual memory
 - d.** cache software
- 97.** What is one notable application of System Monitor?
- a.** locate old software versions
 - b.** locate programs with “memory leaks”
 - c.** identify damaged drive partitions
 - d.** measure remaining battery time
- 98.** Problems ranging from small display irregularities to complete system crashes can often be resolved by...
- a.** reducing the level of graphics hardware acceleration
 - b.** defragmenting the hard drive
 - c.** upgrading the system BIOS
 - d.** none of the above
- 99.** What component can adversely effect the memory performance in your system?
- a.** the CPU “retention mechanism”
 - b.** “SIMM stackers” or other memory adapters
 - c.** the hard drive controller cable
 - d.** the “CMOS Clear” jumper on the motherboard
- 100.** Hard drive performance is dependent upon...
- a.** seek time
 - b.** data transfer rates
 - c.** file fragmentation
 - d.** all of the above

- 101.** In order to indicate a serious error before the video system is initialized, the BIOS will...
- a.** generate a beep code
 - b.** generate a POST code to port 80h
 - c.** generate an error message to the printer
 - d.** halt and fail to boot at all
- 102.** Most PC BIOS versions will send POST codes to port 80h, but typical MicroChannel systems will use port...
- a.** 90h
 - b.** 190h
 - c.** 680h
 - d.** 3BCh
- 103.** A defective system returns a code of "108" on the display. Chances are that the error is in...
- a.** the hard drive
 - b.** the system board
 - c.** the video board
 - d.** the sound board
- 104.** A Dell system emits a beep code of "1-3-3". This error means...
- a.** DMA page register write/read failure
 - b.** chip or data line failure in the first 64KB of main memory
 - c.** slave DMA register failure
 - d.** KBC test failure
- 105.** An old AMI BIOS (copyright 1989) returns a POST code of "13" and halts. This means...
- a.** parity status has not been cleared
 - b.** control could not be passed to the video ROM
 - c.** the keyboard controller is not responding
 - d.** the DMA controller has failed
- 106.** The transfer of heat through physical contact is known as...
- a.** convection
 - b.** conduction
 - c.** radiation
 - d.** absorption
- 107.** What material can improve the heat transfer between a CPU and heat sink?
- a.** ball bearings
 - b.** sleeve bearings
 - c.** adhesive compound
 - d.** thermal grease

- 108.** When a chassis fan stops turning, the **first** thing to check is...
- a.** to see if this is a normal slowdown/stop from a fan thermostat
 - b.** to see if the fan is clogged with dust and debris
 - c.** to see if the fan is bolted securely to the chassis
 - d.** to see if the fan is “ball” or “sleeve” bearing type
- 109.** The standard floppy drive interface uses how many pins?
- a.** 40
 - b.** 68
 - c.** 50
 - d.** 34
- 110.** When a floppy drive fails to step to a desired track, the first thing you should do is...
- a.** replace the floppy drive
 - b.** align the floppy drive
 - c.** check the drive for obstructions
 - d.** check/replace the floppy drive signal cable
- 111.** An LS-120 (120MB) diskette drive can format which disks to 120MB?
- a.** 120MB “SuperDisks”
 - b.** 3.5” HD diskettes
 - c.** 3.5” DD diskettes
 - d.** all of the above
- 112.** When a newly-installed LS-120 drive is not detected, a common fix is to...
- a.** reinstall the LS-120 manager software
 - b.** reverse the “master/slave” relationship with the other drive on that channel
 - c.** remove other drives in the system
 - d.** none of the above
- 113.** If you cannot boot from an LS-120 drive, you should check...
- a.** the operating system version
 - b.** the BIOS settings (CMOS Setup)
 - c.** the 120MB or 1.44MB diskette to see that it’s bootable
 - d.** all of the above
- 114.** What is the **first** procedure that you should complete *before* attempting a diskette alignment?
- a.** reconnect the floppy drive’s signal cable
 - b.** check the floppy drive’s power connection
 - c.** clean the floppy drive’s read/write heads
 - d.** measure the drive’s eccentricity

- 115.** The test which measures the R/W head's actual position vs. the precise center of the outer, middle, and inner tracks is called...
- a.** radial alignment
 - b.** eccentricity
 - c.** disk clamping
 - d.** hysteresis
- 116.** The "self diagnostic" capability now appearing in many current hard drive models is called...
- a.** DART
 - b.** START
 - c.** SMART
 - d.** SART
- 117.** Today, "low-level" formatting is **best** (*most safely*) performed using...
- a.** a BIOS version that offers the correct low-level information for the drive
 - b.** a utility directly from the drive maker intended for your specific model
 - c.** a specialized feature of the operating system which handles low-level formatting
 - d.** the flash utility that you'd use to update a drive's firmware
- 118.** When using a hard drive partitioned for FAT32, it is important that you...
- a.** avoid using drive utilities written for FAT16, or that are not FAT32-aware
 - b.** avoid storing mission-critical or network data on the drive
 - c.** run Disk Defragmenter often to keep the drive's partitions organized
 - d.** check the drive frequently for file system errors
- 119.** What tactic might you use to overcome a drive's capacity limit?
- a.** upgrade the motherboard's BIOS
 - b.** upgrade the drive controller
 - c.** install drive "overlay" software
 - d.** all of the above
- 120.** When a hard drive is not recognized by the operating system, you should **first**...
- a.** repartition the drive with FDISK
 - b.** upgrade the motherboard's BIOS
 - c.** check the drive geometry in the CMOS Setup
 - d.** reinstall the operating system
- 121.** The process of establishing a range of joystick movement and button operation is called...
- a.** formatting
 - b.** calibration
 - c.** highlighting
 - d.** recognition

- 122.** Joystick “drift” may be caused by...
- a.** system conflicts
 - b.** heating
 - c.** poor joystick routines
 - d.** all of the above
- 123.** Erratic or choppy joystick operation may be the result of...
- a.** operating system errors
 - b.** connection problems
 - c.** old or outdated drivers
 - d.** none of the above
- 124.** If you note that the joystick is “not connected” under Windows 95/98, you should **first** check...
- a.** the game port driver
 - b.** the game port configuration
 - c.** the joystick calibration
 - d.** the Windows version
- 125.** A keyboard interface converts the row and column signals of a key matrix into single-byte codes called...
- a.** key codes
 - b.** scan codes
 - c.** marker codes
 - d.** a and c above
- 126.** Sticky or erratic key operation is most frequently corrected by...
- a.** replacing the defective key(s)
 - b.** replacing the entire keyboard
 - c.** cleaning the suspect key contact(s)
 - d.** updating the keyboard’s driver
- 127.** Which two keys should you generally NOT remove if you can avoid it?
- a.** the <Tab> key and <Shift> keys
 - b.** the <Enter> key and <Backspace> keys
 - c.** the <SpaceBar> and <Enter> keys
 - d.** the <Shift> key(s) and <Backspace> keys
- 128.** The **easiest** way to correct a keyboard controller (KBC) error is to...
- a.** replace the motherboard
 - b.** replace the keyboard
 - c.** replace the keyboard lock
 - d.** clean the keyboard thoroughly

- 129.** When a wireless keyboard produces random characters, you should **first** check that...
- a.** there are fresh batteries in the receiver
 - b.** there are fresh batteries in the transmitter
 - c.** the transmitter and receiver are set to the same channel
 - d.** the receiver is properly connected to the system
- 130.** Rambus memory modules are typically denoted as...
- a.** DIPs
 - b.** SIMMs
 - c.** DIMMs
 - d.** RIMMs
- 131.** Over the 1MB mark, Windows 95/98 makes direct use of...
- a.** EMS memory
 - b.** XMS memory
 - c.** conventional memory
 - d.** upper memory
- 132.** SDRAM performance is measured in...
- a.** cycle time
 - b.** access time
 - c.** wait states
 - d.** access latency
- 133.** A “164” error at start time generally means you should...
- a.** reseat the memory devices that have not been installed properly
 - b.** replace one or more defective memory devices
 - c.** enter the CMOS Setup and configure the correct amount of memory
 - d.** repair one or more defective SIMM/DIMM sockets
- 134.** A memory data line failure at <xxxx> normally means that you should...
- a.** reseat the memory devices that have not been installed properly
 - b.** replace one or more defective memory devices
 - c.** enter the CMOS Setup and configure the correct amount of memory
 - d.** repair one or more defective SIMM/DIMM sockets
- 135.** Windows “protection errors” after adding new SIMMs/DIMMs typically occur because of...
- a.** a corrupt installation of Windows 95/98
 - b.** a SIMM/DIMM failure due to accidental static discharge
 - c.** an incorrect CMOS Setup configuration
 - d.** improperly-timed SIMMs/DIMMs which are too fast/slow for the motherboard

- 136.** What should you check **first** when a system is unable to control line A20?
- check the EMM386 command line
 - check the HIMEM command line
 - check the keyboard controller chip
 - check the SIMM/DIMM installation
- 137.** In order to access memory **over** 1MB, a computer requires...
- drive overlay software
 - SIMM Stackers
 - memory manager software
 - real-mode drivers
- 138.** The one step you should take **before** optimizing your conventional memory is to...
- backup the current CONFIG.SYS and AUTOEXEC.BAT files
 - delete the current CONFIG.SYS and AUTOEXEC.BAT files
 - rename the current CONFIG.SYS and AUTOEXEC.BAT files
 - all of the above
- 139.** If you see an error message when attempting to relocate a driver or TSR, the **best** tactic is to...
- delete the offending driver or TSR
 - update the offending driver or TSR to a newer version
 - remove the driver or TSR from the startup file(s)
 - rearrange the loading order of other drivers and TSRs to maximize the use of space
- 140.** If you find that nothing is being loaded into the UMA, you should **first** check that...
- the "dos=umb" command is present
 - the HIMEM command line precedes EMM386
 - the EMM386 line uses the "noems" or "ram" switch
 - there is adequate memory space between 640KB and 1024KB
- 141.** If software acts erratically or improperly when loaded into the UMA, you should...
- delete the offending software
 - run the offending software in conventional memory
 - disable HIMEM in CONFIG.SYS
 - use an older version of the offending software
- 142.** If the DOS MEM function displays odd results under QEMM 7.01, you should...
- correct the command line switches used with QEMM
 - disable QEMM entirely
 - replace QEMM with HIMEM.SYS and EMM386.EXE
 - upgrade QEMM 7.01 to a later version

- 143.** The practices of “clicking”, “double-clicking”, and “dragging” are all...
- a.** mouse gestures
 - b.** mouse glyphs
 - c.** mouse motions
 - d.** none of the above
- 144.** What part of the mouse/trackball must be removed to allow proper cleaning?
- a.** the rollers
 - b.** the cover
 - c.** the ball
 - d.** the cable
- 145.** A typical mouse can use which interface(s)?
- a.** USB
 - b.** serial (RS-232)
 - c.** PS/2
 - d.** all of the above
- 146.** What feature of Windows 95/98 allows you to move the mouse using the numeric keypad?
- a.** NumberMouse
 - b.** MouseNumbers
 - c.** MousePad
 - d.** MouseKeys
- 147.** A USB mouse is attached but not detected. You should **first** check...
- a.** the USB controller
 - b.** the Windows version
 - c.** the mouse version
 - d.** the mouse driver
- 148.** When a mouse cursor moves erratically (or not at all), you should **first**...
- a.** power down the PC and check the mouse connections
 - b.** power down the PC and clean the mouse completely
 - c.** replace the defective mouse
 - d.** upgrade the mouse driver and applet software
- 149.** The ITU standard technology that allows modems to download up to 56Kbps is called...
- a.** K56flex
 - b.** x2
 - c.** V.90
 - d.** all of the above

- 150.** A relatively recent modem that eliminates the controller and data pump portions of a conventional modem is called...
- a.** a DSL modem
 - b.** an ISDN modem
 - c.** a cable modem
 - d.** a WinModem
- 151.** Typical modem commands are based on the...
- a.** AT command set
 - b.** Smart command set
 - c.** modem's chipset commands
 - d.** Windows configuration commands
- 152.** Prior to the current 56Kbps standard, the 33.6Kbps standard was known as...
- a.** V.24
 - b.** V.30
 - c.** V.34+
 - d.** V.90
- 153.** One of the best file transfer protocols is...
- a.** Xmodem
 - b.** Ymodem
 - c.** Zmodem
 - d.** Sealink
- 154.** When your modem is detected as an older/slower/different modem, the best solution is...
- a.** replace the modem with a different model
 - b.** update the modem's driver/.INF files
 - c.** disconnect and reinsert the modem
 - d.** none of the above
- 155.** When you receive consistent errors while sending faxes, you should first suspect that...
- a.** the modem is defective and should be replaced
 - b.** the modem drivers need to be updated
 - c.** the modem initialization string is wrong or incomplete
 - d.** the fax software is outdated or corrupted
- 156.** You communicate fine in DOS, but not in Windows, you should first suspect that...
- a.** the modem drivers have not been loaded properly
 - b.** the modem is defective and should be replaced
 - c.** the telephone line attached to the modem is not working
 - d.** you have a damaged installation of Windows 95/98

- 157.** On a monitor, a picture element is called a...
- a.** texture
 - b.** pixel
 - c.** dot
 - d.** slot
- 158.** Color purity is dependent upon...
- a.** linearity
 - b.** high-voltage
 - c.** convergence
 - d.** mask material
- 159.** The scanning pattern which electron beams follow is typically referred to as the...
- a.** shadow
 - b.** raster
 - c.** refresh
 - d.** sawtooth
- 160.** When repairing or aligning monitors, the most important concern is...
- a.** X-ray danger
 - b.** EMI danger
 - c.** heat danger
 - d.** high-voltage danger
- 161.** Before making an alignment adjustment, you should...
- a.** contact the monitor manufacturer for instructions
 - b.** use a mirror to check the display
 - c.** mark the starting location of the adjustment
 - d.** check the cost of a replacement monitor
- 162.** A motherboard which contains processing circuitry is referred to as...
- a.** passive backplane
 - b.** active backplane
 - c.** modular backplane
 - d.** retrofit backplane
- 163.** A motherboard is often denoted by...
- a.** its slot or socket type
 - b.** its memory type
 - c.** its I/O ports
 - d.** its cache type

- 164.** You find that a retention mechanism is not holding a Slot 1 CPU in place. Chances are that...
- a.** the CPU is packaged incorrectly and should be replaced or upgraded
 - b.** the retention mechanism itself is not mounted properly to the motherboard
 - c.** the slot type is incorrect, so the CPU is not seating correctly
 - d.** none of the above
- 165.** If the system powers back on automatically after a power failure, this normally means...
- a.** the motherboard is damaged and should be replaced
 - b.** the power supply is damaged and should be replaced
 - c.** the CMOS Setup is configured to “Last State”
 - d.** the BIOS is corrupt and requires a “downgrade” to an older version
- 166.** When a newer motherboard will not boot with an older CPU, but starts fine with a newer CPU, you should suspect that...
- a.** the motherboard is damaged and should be replaced with a new model
 - b.** the older CPU is damaged and should be replaced with another model
 - c.** the motherboard’s BIOS will not support the older CPU, and the BIOS needs upgrading
 - d.** the motherboard uses a 66MHz “lockout” that prevents older CPUs from running
- 167.** If your BIOS indicates PC100 memory even when PC133 memory is installed, chances are...
- a.** the BIOS is damaged and the chip requires immediate replacement
 - b.** the system is using the wrong memory timing parameters in the CMOS Setup
 - c.** the memory devices are not installed properly
 - d.** one or more memory devices are defective and should be replaced
- 168.** A “serial presence detect” error at boot time will usually indicate...
- a.** one or more serial ports are not responding
 - b.** one or more memory devices do not meet system speed requirements
 - c.** the mouse (or other pointing device) is faulty or disconnected
 - d.** the BIOS cannot identify one or more system devices, and must be upgraded
- 169.** Windows 98 reports insufficient memory with 32MB installed. You should suspect that...
- a.** there is too much “shared RAM” between the system RAM and video system
 - b.** the BIOS could not detect all 32MB of the installed RAM
 - c.** one or more memory devices are defective or installed improperly
 - d.** your memory timing parameters are set improperly in the CMOS Setup
- 170.** When a PnP device fails to work on one motherboard, but works fine on another, chances are...
- a.** the original motherboard is damaged or outdated
 - b.** the PnP device is intermittent and should be replaced
 - c.** the original motherboard’s BIOS is damaged and should be replaced
 - d.** the original motherboard’s BIOS must be upgraded

- 171.** The most popular protocol for dial-up networking (DUN) is...
- a.** SLIP
 - b.** PPP
 - c.** TCP
 - d.** IP
- 172.** If your terminal window shows random characters during the logon process, chances are that...
- a.** the server's terminal emulation is not compatible with yours
 - b.** the server is offline or not responding properly
 - c.** you have installed PPP rather than SLIP
 - d.** DUN is not properly installed on your system
- 173.** Dial-up networking allows your computer to access...
- a.** the Internet
 - b.** corporate networks
 - c.** Intranets
 - d.** all of the above
- 174.** If the SLIP "ping" feature works but other application(s) do not, chances are that...
- a.** your TCP settings are wrong
 - b.** your DUN connection settings are wrong
 - c.** your IP header compression setting is wrong
 - d.** your application(s) are not installed or configured properly
- 175.** If the DUN cannot find your modem, you should first check to see that...
- a.** the DUN software is installed and configured properly
 - b.** the modem is installed and responding properly
 - c.** the subnet mask is entered properly
 - d.** the ISP's modem is compatible with yours
- 176.** A "port in use" or "port already open" DUN error generally means that....
- a.** the modem is defective and should be replaced
 - b.** a vital communication file is already present in memory
 - c.** a COM port is defective or disabled in the CMOS Setup
 - d.** none of the above
- 177.** If dial-up scripting does not work after reinstalling the DUN, you should...
- a.** reinstall the DUN software
 - b.** reinstall Windows 95/98
 - c.** reinstall the TCP/IP stack
 - d.** reinstall the dial-up scripting tool

- 178.** When your DUN dialog prompts you for a domain name, you should...
- a.** check with your ISP for updated connection settings
 - b.** reinstall the DUN software
 - c.** reconfigure your domain settings in the DUN software
 - d.** rename and recreate the password file
- 179.** What is the proper command syntax to recreate a master boot record under MaxBlast 9.xxM?
- a.** FDISK /MBR
 - b.** EZDRIVE /MBR
 - c.** DG MBR
 - d.** ONTRACK /MBR
- 180.** A MaxBlast “configuration error” is normally caused by...
- a.** an incompatibility between the drive and MaxBlast
 - b.** an incompatibility between the system and MaxBlast
 - c.** an incompatibility between FAT32 and MaxBlast
 - d.** an incompatibility between DOS and MaxBlast
- 181.** A MaxBlast “PT error” usually means...
- a.** the master boot record is corrupted
 - b.** the hard drive is not configured properly
 - c.** the MaxBlast software is corrupt or installed improperly
 - d.** all of the above
- 182.** What’s the **first** thing to check when Data Lifeguard Tools cannot identify IDE drives?
- a.** verify that the DLT software is installed properly
 - b.** check the IDE drive cabling
 - c.** check the drive’s entries in the CMOS Setup
 - d.** check Windows 95/98 for corrupted or missing files
- 183.** You crashed the PC, now EZ-BIOS (DLT) won’t initialize. You should...
- a.** reinstall the hard drive
 - b.** update your version of DLT
 - c.** repartition the drive
 - d.** recreate the MBR
- 184.** What is the “universal” method of removing Disk Manager?
- a.** repartition the drive with FDISK
 - b.** reinstall Disk Manager
 - c.** rerun the Disk Manager software manually
 - d.** any of the above

- 185.** When Disk Manager won't work with Windows 95/98, your main course of action is to...
- a.** reinstall Windows 95/98 from scratch
 - b.** reinstall Disk Manager with the same version
 - c.** upgrade Disk Manager to a compatible version
 - d.** repartition the drive with FAT32 FDISK
- 186.** A 36-bit color scanner can discern between...
- a.** 65K colors
 - b.** 16.7M colors
 - c.** 1B colors
 - d.** 68B colors
- 187.** Which of the following factors do **not** influence the size (bytes) of a scanned image?
- a.** image dimensions
 - b.** scanning resolution
 - c.** color depth
 - d.** none of the above
- 188.** The standard software interface used to communicate with a typical scanner is called...
- a.** TRIAL
 - b.** TWANG
 - c.** TWAIN
 - d.** TWINE
- 189.** Which file format offers the greatest compression for scanned images?
- a.** .GIF
 - b.** .JPG
 - c.** .TIF
 - d.** .PCX
- 190.** When scanning cycle time seems slow, you should **first** check for...
- a.** outdated or corrupt scanner drivers
 - b.** unneeded applications running in the background
 - c.** incorrect or inadequate video system settings
 - d.** insufficient virtual memory space
- 191.** A modern parallel port is almost always configurable to ECP/EPP...
- a.** using one or more motherboard jumpers
 - b.** through the CMOS Setup
 - c.** using a real-mode parallel port driver
 - d.** using one or more DIP switches

- 192.** The base address for LPT2 is...
- a.** 0378h
 - b.** 0278h
 - c.** 03BCh
 - d.** 02BCh
- 193.** When a parallel port error is indicated, your **first** check should be to...
- a.** isolate any potential hardware conflicts
 - b.** install a new parallel port card
 - c.** run a specialized diagnostic to check the parallel port
 - d.** disable your startup files
- 194.** If the data being printed seems “lost” or randomly “garbled”, you should **first** check...
- a.** the printer driver
 - b.** the printer self-test
 - c.** the printer cable
 - d.** the printer port setting
- 195.** A typical printer cable should not exceed...
- a.** 3'
 - b.** 6'
 - c.** 8'
 - d.** 10'
- 196.** The PC card “layer” that supplements the BIOS by providing low-level routines is called...
- a.** the hardware layer
 - b.** the socket services
 - c.** the card services
 - d.** the operating system
- 197.** The additional software often needed to configure a PC Card’s resources is called...
- a.** the socket services
 - b.** the card services
 - c.** the card dialog
 - d.** the enabler
- 198.** What card type is most frequently used for memory cards?
- a.** Type I
 - b.** Type II
 - c.** Type III
 - d.** Type IV

- 199.** A typical PC Card uses how many pins in its connector?
- a.** 34 pins
 - b.** 40 pins
 - c.** 50 pins
 - d.** 68 pins
- 200.** When a PC Card is reported as “not installed” or “not recognized”, chances are best that...
- a.** the card is defective and should be replaced
 - b.** the card’s drivers are old and should be updated
 - c.** the card’s enabler is not installed
 - d.** other drivers are interfering with the PC Card
- 201.** When a PC-TV card moves video pixels into an off-screen part of video memory called a “secondary surface” for display, this technique is called...
- a.** primary surface mode
 - b.** video overlay mode
 - c.** video digitizer mode
 - d.** secondary overlay mode
- 202.** Which video standard is typically used in North America?
- a.** PAL
 - b.** NTSC
 - c.** SECAM
 - d.** none of the above
- 203.** If a non-Intel motherboard chipset won’t let your PC-TV card bus master the PCI bus (causing a system lockup), you should...
- a.** replace the defective PC-TV card
 - b.** upgrade the PC-TV card’s firmware
 - c.** upgrade the PC-TV card driver
 - d.** upgrade the motherboard’s BIOS
- 204.** A “washed-out” PC-TV display image can usually be identified and corrected by...
- a.** upgrading the PC-TV card driver
 - b.** replacing the defective PC-TV card
 - c.** increasing the display resolution to 800x600 or higher
 - d.** increasing the display color depth above 256 colors
- 205.** When the TV window is just “black”, you should first check...
- a.** for the latest video card drivers and firmware
 - b.** for proper PC-TV card installation and configuration
 - c.** for adequate video card memory (2MB or more)
 - d.** for the latest motherboard BIOS version

- 206.** If you're unable to download the WebTV program guide because you "cannot connect", you will probably need to...
- a.** upgrade to a faster modem in order to maintain the connection
 - b.** select a new ISP with better access to WebTV facilities
 - c.** update your dialing settings through the Internet Connection wizard
 - d.** uninstall and reinstall your DUN software
- 207.** When only a few channels are available, but they're in black & white, you probably need to...
- a.** replace the defective PC-TV card
 - b.** update the motherboard BIOS
 - c.** update the PC-TV card software
 - d.** update the motherboard's bus-mastering drivers
- 208.** If you notice that the display flickers when viewing TV, your best solution is often to...
- a.** reduce the display resolution
 - b.** reduce the display color depth
 - c.** select a different display driver
 - d.** try a different monitor model
- 209.** A handwriting recognition program organizes each set of pen strokes into a...
- a.** glyph
 - b.** gesture
 - c.** icon
 - d.** symbol
- 210.** You do not see any "ink" when handwriting. Chances are that you'll need to...
- a.** upgrade the video driver
 - b.** upgrade the pen tablet driver
 - c.** upgrade Windows
 - d.** replace the defective pen
- 211.** When a pen seems to work intermittently, you should **first** check...
- a.** the pen batteries
 - b.** the pen cable to the tablet
 - c.** the pen tablet drivers
 - d.** the tablet's connection to the PC
- 212.** DOS pen tablet drivers refuse to load, so you should **first** check that...
- a.** the pen drivers are the latest version
 - b.** the pen batteries are fresh
 - c.** the tablet is connected and receiving power
 - d.** Windows 95/98 can recognize the tablet

- 213.** The pen cursor seems to jitter while drawing. You should correct the issue by...
- a.** replacing the tablet outright
 - b.** upgrading the tablet drivers
 - c.** replacing the tablet's power pack or batteries
 - d.** upgrading the PC's serial port to one with a faster UART
- 214.** Which of the features below are NOT handled by PnP?
- a.** loading the operating system
 - b.** identifying installed devices
 - c.** determining resource requirements
 - d.** configuring the system to avoid conflicts
- 215.** The process Windows 95/98 uses when searching for legacy devices is called...
- a.** detection
 - b.** enumeration
 - c.** indexing
 - d.** selection
- 216.** When using a PnP operating system, the PnP BIOS resource assignments should be...
- a.** disabled in favor of the PnP OS
 - b.** enabled to supplement the OS
 - c.** disabled in favor of PnP device drivers
 - d.** enabled to supplement PnP TSRs
- 217.** Which Windows 95/98 tool is available to let you install legacy devices?
- a.** the Control Panel
 - b.** the Add New Hardware wizard
 - c.** the Add/Remove Software wizard
 - d.** none of the above
- 218.** If the "Energy Star" check box is not available for your monitor, you should...
- a.** disable the automatic detection of PnP monitors
 - b.** upgrade your monitor selection and drivers
 - c.** reinstall the monitor
 - d.** replace the defective monitor with a more recent model
- 219.** If you configure a device to use IRQ 12, but you have trouble restarting the PC, you should...
- a.** replace the defective device
 - b.** reserve IRQ 12 in the Device Manager
 - c.** redetect the device using Device Manager
 - d.** update the device's drivers

- 220.** A severe undervoltage condition is known as a...
- a.** surge
 - b.** glitch
 - c.** brownout
 - d.** blackout
- 221.** Lightning strikes are notorious for causing...
- a.** blackouts
 - b.** spikes
 - c.** surges
 - d.** brownouts
- 222.** A power protection device that runs a system **continuously** from battery power is called...
- a.** an uninterruptable power supply
 - b.** a battery backup
 - c.** a surge suppressor
 - d.** a buck/boost transformer
- 223.** What component of a UPS should be periodically replaced?
- a.** the battery(s)
 - b.** the switching circuit
 - c.** the inverter circuit
 - d.** the serial status interface
- 224.** When a UPS is on but a PC is not receiving power, chances are that...
- a.** the UPS inverter circuit is defective
 - b.** the UPS batteries have failed
 - c.** the UPS is overloaded by the attached PC equipment
 - d.** the PC power supply has failed
- 225.** An ATX-style power connector uses...
- a.** two 6-pin connectors
 - b.** one 20-pin connector
 - c.** one 6-pin connector
 - d.** one 15-pin connector
- 226.** The gray wire on an ATX power connector is...
- a.** the ground wire
 - b.** a +12Vdc supply
 - c.** a -5Vdc supply
 - d.** a Power OK signal

- 227.** What is the **first** thing you should check when you suspect power problems?
- a.** check the motherboard's power connector(s)
 - b.** check the AC supply from the wall outlet
 - c.** check the power supply's fuse
 - d.** check the power switch at the motherboard
- 228.** Which of the following is **NOT** a typical Windows power scheme?
- a.** always on
 - b.** server/workstation
 - c.** home/office desk
 - d.** portable/laptop
- 229.** An ACPI error shown against a red background most often suggests...
- a.** a hardware or BIOS error
 - b.** an operating system error
 - c.** a driver error
 - d.** a connection error
- 230.** When a PC enters the hibernate mode when the standby mode is selected, you will need to...
- a.** reinstall Windows 98
 - b.** upgrade your device drivers
 - c.** patch Windows 98
 - d.** disable all of your power conservation modes
- 231.** What is the most important step before performing routine system maintenance?
- a.** backup your data
 - b.** check for dust around the system
 - c.** run ScanDisk to check for file problems
 - d.** create a new boot diskette
- 232.** What part of the monitor should always be kept free of dust and obstructions?
- a.** the CRT
 - b.** the top vents
 - c.** the user controls
 - d.** the AC cord
- 233.** What one chemical should you **NOT** use around CDs or the CD-ROM drive?
- a.** isopropyl alcohol
 - b.** demineralized water
 - c.** ammonia
 - d.** mild detergent

- 234.** How can you correct color purity problems discovered during routine maintenance?
- a. adjust the monitor's brightness
 - b. adjust the monitor's contrast
 - c. degauss the monitor's CRT
 - d. recalibrate the monitor's linearity
- 235.** What do you generally NOT need to check when performing an internal system check?
- a. the CPU installation
 - b. all internal signal and power cables
 - c. the memory device installation(s)
 - d. the motherboard mountings
- 236.** When you find problems with a Zip drive, what is one of the first things you should check for?
- a. updated Zip drive firmware
 - b. updated Zip drivers and applet software
 - c. physical obstructions or other drive trouble
 - d. damaged or incompatible disks
- 237.** If Zip drive operation is erratic (i.e. you encounter data transfer problems), you should **first**...
- a. check the drive's cabling and power
 - b. update the drive's software
 - c. replace the defective drive
 - d. check for hardware conflicts
- 238.** When a Zip drive displays a Floppy icon under Windows, you should **first** suspect that...
- a. the drive is damaged and should be replaced
 - b. there is a cabling problem between the drive and the system
 - c. there is a real-mode Iomega driver on the system
 - d. you need to upgrade the Zip software to a later version
- 239.** If the system hangs up while installing Windows 95/98 Zip drivers, you should **first** suspect...
- a. there may be a hardware conflict on the system
 - b. there may be a driver conflict on the system
 - c. the driver software is damaged or corrupted
 - d. the drive is not responding because it's defective
- 240.** A "general failure" reading the Zip drive should tell you to **first** check...
- a. the Windows 95/98 installation for damaged files
 - b. the signal cable between the drive and system
 - c. the Zip disk format
 - d. the Zip driver version

- 241.** Which command will “unprotect” a Jaz disk?
- a.** REWIND
 - b.** RECLAIM
 - c.** RESTORE
 - d.** RENEW
- 242.** If the system indicates “DOS Compatibility Mode” when booting from a Jaz disk, you should...
- a.** upgrade the Jaz disk drivers to a later version
 - b.** relocate the Windows swap file to a non-removable disk
 - c.** remove and reinstall the Jaz drive from scratch
 - d.** replace the defective Jaz drive outright
- 243.** If the GUEST utility cannot locate the Jaz Tools disk in your drive, you should first try...
- a.** reinserting the Jaz Tools disk
 - b.** replacing the defective Jaz Tools disk
 - c.** using an updated Jaz Tools disk
 - d.** none of the above
- 244.** A grinding noise from a Jaz drive normally indicates...
- a.** a loose or damaged signal cable
 - b.** a disk failure
 - c.** a communication problem
 - d.** a drive failure
- 245.** Ultra3 SCSI is also known as...
- a.** Fast 20 SCSI
 - b.** Fast 40 SCSI
 - c.** Ultra160 SCSI
 - d.** Ultra SCSI-2
- 246.** Both ends of a SCSI chain must be properly...
- a.** crimped
 - b.** terminated
 - c.** actuated
 - d.** configured
- 247.** Most SCSI host controllers are configured as...
- a.** ID 7
 - b.** ID 5
 - c.** ID 3
 - d.** ID 1

- 248.** A SCSI system feature that supports an automatic configuration is known as...
- a.** SECAM
 - b.** SCAM
 - c.** SMART
 - d.** SNAP
- 249.** The system won't boot from a floppy after installing a SCSI host adapter. You should first...
- a.** check the SCSI host adapter drivers
 - b.** reinstall the operating system
 - c.** check the host adapter's configuration and installation
 - d.** check the SCSI IDs of all attached devices
- 250.** A "host adapter configuration error" often suggests...
- a.** a problem with the PCI expansion slot configuration
 - b.** a problem with one or more SCSI devices
 - c.** a problem with the SCSI controller card
 - d.** a problem with SCSI bus termination or cabling
- 251.** Which of the following is NOT added to a serial data frame?
- a.** sync bit(s)
 - b.** start bit
 - c.** stop bit(s)
 - d.** parity bit
- 252.** The base I/O address of your first serial port (COM1) is...
- a.** 02E8h
 - b.** 03E8h
 - c.** 02F8h
 - d.** 03F8h
- 253.** Which real-mode command can be used to configure a serial port?
- a.** MEM
 - b.** MODE
 - c.** MARK
 - d.** DEBUG
- 254.** Infrared communication problems in daylight can often be resolved by...
- a.** boosting the infrared transmission power
 - b.** shielding the IR receiver/transmitter from direct sunlight
 - c.** switching to different infrared device drivers
 - d.** using direct cable connections instead of infrared

- 255.** Sound power is measured in...
- a.** watts
 - b.** bells
 - c.** decibels
 - d.** logs
- 256.** The decrease in sound energy at both ends of a sound card's frequency range is called...
- a.** harmonics
 - b.** quantization error
 - c.** rolloff
 - d.** filtering
- 257.** Which microphone type requires "phantom power" in order to operate?
- a.** dynamic
 - b.** condenser
 - c.** electret
 - d.** none of the above
- 258.** What sound card technology allows you to send and receive sound simultaneously?
- a.** full duplex
 - b.** half duplex
 - c.** duplex
 - d.** simultaneous voice over data
- 259.** A noticeable buzz or hum in your speakers can often be easily corrected by...
- a.** replacing the speakers
 - b.** rerouting the speaker cables
 - c.** replacing the sound card
 - d.** changing the speaker batteries
- 260.** Short bursts of sound when playing a .WAV file are often caused by...
- a.** a motherboard BIOS problem
 - b.** a fault or firmware bug in the sound card itself
 - c.** an old or corrupted sound card driver
 - d.** an incompatibility with the motherboard chipset
- 261.** Which of the following components is NOT required to establish a working PC?
- a.** a motherboard
 - b.** a video card
 - c.** a processor
 - d.** a sound card

- 262.** When mounting a motherboard in the chassis, you should be sure that...
- a.** the expansion slots align with the chassis opening(s)
 - b.** the mounting point align with the chassis standoffs
 - c.** the I/O ports fit properly in the chassis openings
 - d.** all of the above
- 263.** In today's motherboards, a regular 168-pin DIMM constitutes...
- a.** half of a bank
 - b.** one banks
 - c.** two banks
 - d.** three banks
- 264.** The amount of L2 cache on a Slot 1 motherboard is...
- a.** set by the amount of L2 cache in the Slot 1 processor module
 - b.** set by the amount of L2 cache on the motherboard's COAST module
 - c.** set by the amount of RAM installed on the motherboard
 - d.** set by the configuration of your CMOS Setup
- 265.** When installing a video card on a motherboard with an on-board video port, you should...
- a.** add memory to support the add-on AGP video card
 - b.** disable the motherboard's on-board video port
 - c.** disable the motherboard's video driver
 - d.** use a lower video resolution and color depth
- 266.** After installing a floppy drive, what will you need to do before you can use the drive?
- a.** set a jumper to enable the drive
 - b.** insert a bootable floppy diskette
 - c.** configure the drive in the CMOS Setup
 - d.** none of the above
- 267.** When a Ditto drive is not detected when running from an accelerator card, you should first...
- a.** check the drive's power cable
 - b.** check the drive's signal cable
 - c.** check the accelerator card's installation
 - d.** upgrade the drive's backup software
- 268.** A Travan tape can typically support up to...
- a.** 1GB
 - b.** 2GB
 - c.** 4GB
 - d.** 8GB

- 269.** Which of the following symptoms do NOT suggest tape cleaning neglect?
- a. signal dropouts
 - b. tape media errors
 - c. tape read/write errors
 - d. broken tape
- 270.** When you encounter problems loading or unloading a tape, you should **first** check...
- a. the tape cartridge itself
 - b. the drive mechanism for obstructions
 - c. clean the drive
 - d. clean the tape
- 271.** If you encounter frequent “bad sector” errors, you should **first**...
- a. clean the drive motors
 - b. check for broken or pulled tape
 - c. clean the drive read/write heads
 - d. replace the defective tape
- 272.** You cannot reliably save or restore files under Microsoft Backup. You should **first**...
- a. reformat the tape and try saving new files
 - b. replace the defective tape cartridge
 - c. clean the drive read/write heads
 - d. remove and reinstall the tape drive device
- 273.** The first step in the 3D process is to...
- a. transform the object
 - b. clip the scene
 - c. light the scene
 - d. triangularize the object(s)
- 274.** Which component is part of the DirectX “foundation” layer?
- a. DirectPlay
 - b. DirectModel
 - c. DirectDraw
 - d. all of the above
- 275.** Add-on video devices can sometimes interface to the video card directly using...
- a. the AGP bus connector
 - b. the video feature connector
 - c. the DirectDraw API
 - d. the PCI bus connector

- 276.** If the motherboard's bus is set to 100MHz, what should the AGP bus ratio be set for?
- a. 1:1
 - b. 2:3
 - c. 1:2
 - d. 3:4
- 277.** If the monitor's image "rolls" you should...
- a. reduce the display resolution
 - b. reduce the display color depth
 - c. upgrade the video adapter driver
 - d. replace the defective monitor
- 278.** A late-model video card doesn't work with your VIA or ETEQ-based motherboard. You should...
- a. replace the defective motherboard
 - b. install the IRQ routing drivers for that motherboard
 - c. upgrade the drivers for your video adapter
 - d. download and install a firmware update for the video card
- 279.** A DirectX-based program causes a "black screen". Chances are that you should...
- a. change the display color depth
 - b. upgrade the video drivers
 - c. reduce the monitor's refresh rate
 - d. replace the defective monitor
- 280.** When a video adapter will not operate in all of its video modes, chances are that...
- a. the video card is defective and should be replace
 - b. the video driver must be upgraded
 - c. the video firmware must be upgraded
 - d. there's a memory conflict in upper memory
- 281.** What is the best video format for capture?
- a. Digital Betacam
 - b. Betacam SP
 - c. DVD
 - d. VHS
- 282.** When video capture software reports that the capture hardware wasn't found, you should **first**...
- a. upgrade the video capture drivers to a later version
 - b. replace or reinstall the suspect video capture device
 - c. verify that the capture software is compatible with the video capture device
 - d. none of the above

- 283.** If Windows keeps identifying older video capture devices, you should **first** try to...
- a.** upgrade the video capture drivers to a later version
 - b.** locate and delete the older .INF file(s)
 - c.** replace or reinstall the suspect video capture device
 - d.** verify the connections between the capture card and the video source
- 284.** If your video capture utility cannot initialize your capture device, chances are that...
- a.** the video capture card is damaged or installed improperly
 - b.** the video capture drivers are corrupted or outdated
 - c.** there is an IRQ conflict between the capture card and other devices
 - d.** the video signal source is inappropriate or connected incorrectly
- 285.** You cannot capture video files greater than 2GB. You may be able to get around this by...
- a.** capturing to a drive with a partition larger than 2GB (i.e. FAT32)
 - b.** selecting an alternative video capture source
 - c.** selecting a different video format for capture
 - d.** all of the above
- 286.** A destructive program disguised as a useful utility or program is called a...
- a.** bug
 - b.** worm
 - c.** Trojan horse
 - d.** infection
- 287.** A “time bomb” type of virus delivers its payload based on...
- a.** date
 - b.** time
 - c.** repetitions
 - d.** all of the above
- 288.** Viruses that “mutate” or create different signatures with each infection are called...
- a.** hidden
 - b.** chameleons
 - c.** polymorphic
 - d.** quazimorphic
- 289.** What is the easiest way to prevent the transfer of viruses with floppy diskettes?
- a.** write-protect the floppy diskettes
 - b.** install anti-virus software on each diskette
 - c.** install anti-virus software on the host computer
 - d.** use high-density floppy diskettes

- 290.** A virus identified with the prefix VBS indicates that the virus is...
- a.** based on a keyboard macro
 - b.** based on Visual Basic
 - c.** based on an Access macro
 - d.** based on an Excel macro
- 291.** The USB interface offers a maximum data transfer rate of...
- a.** 1.5Mb/s
 - b.** 3Mb/s
 - c.** 6Mb/s
 - d.** 12Mb/s
- 292.** The minimum required operating system for USB support is...
- a.** Windows 95 retail
 - b.** Windows 95 OSR 2.1
 - c.** Windows 98 retail
 - d.** Windows 98/SE
- 293.** When you cannot use a USB keyboard or mouse through DOS, you should consider...
- a.** abandoning the use of USB devices
 - b.** upgrading to a later version of Windows
 - c.** upgrading the motherboard BIOS
 - d.** using a different USB hub device
- 294.** If Windows hangs up when a USB device is connected “hot”, you’ll probably need to...
- a.** replace the defective USB port
 - b.** upgrade your version of Windows
 - c.** replace the defective USB device
 - d.** upgrade the motherboard BIOS
- 295.** If a USB device fails to function properly in a USB port, you should check to see that...
- a.** the USB device is compliant with UHCI
 - b.** the USB device is powered and connected properly
 - c.** the USB port is active and identified properly in the Device Manager
 - d.** all of the above
- 296.** The Windows Registry file that contains system and software settings is called...
- a.** USER.DAT
 - b.** WIN.INI
 - c.** SYSTEM.DAT
 - d.** SYSTEM.INI

- 297.** What Windows tool is available to help you isolate environment problems?
- a.** ScanDisk
 - b.** System Configuration Utility
 - c.** Registry Editor
 - d.** System Recovery
- 298.** When you have trouble starting Windows, what is the **first** tactic that you should try?
- a.** start the system in the Safe Mode
 - b.** remark-out any real-mode drivers or TSRs
 - c.** run ScanDisk to isolate and fix any file system problems
 - d.** reinstall Windows into another directory
- 299.** Which of the issues below are typically NOT responsible for Windows shutdown problems?
- a.** a video card is not assigned an IRQ in real-mode
 - b.** there is one or more bad clusters on the boot drive
 - c.** a program or TSR may not close correctly
 - d.** a damaged or conflicting device driver is being loaded
- 300.** If you can print from a command prompt, but NOT from Windows, you should **first** check...
- a.** the printer's connections to the parallel port
 - b.** the printer's drivers and applet software
 - c.** the printer's control panel settings or configuration
 - d.** the Windows spool settings

***Congratulations**...*this completes the examination for the *DLS Technician's Certificate III*. Before sending in the exam, be sure to take some time and check your answers, make sure that only *one* answer is marked for each question, verify that you have answered *every* question, and see that your contact/billing information on the cover sheet is correct and complete.

DLS Technician's Certificate III

Answer Sheet 1 of 3

Please Circle Only **One** Letter Corresponding to Each Answer

- | | | | | | | | |
|----|---------|----|---------|----|---------|-----|---------|
| 1 | A B C D | 26 | A B C D | 51 | A B C D | 76 | A B C D |
| 2 | A B C D | 27 | A B C D | 52 | A B C D | 77 | A B C D |
| 3 | A B C D | 28 | A B C D | 53 | A B C D | 78 | A B C D |
| 4 | A B C D | 29 | A B C D | 54 | A B C D | 79 | A B C D |
| 5 | A B C D | 30 | A B C D | 55 | A B C D | 80 | A B C D |
| 6 | A B C D | 31 | A B C D | 56 | A B C D | 81 | A B C D |
| 7 | A B C D | 32 | A B C D | 57 | A B C D | 82 | A B C D |
| 8 | A B C D | 33 | A B C D | 58 | A B C D | 83 | A B C D |
| 9 | A B C D | 34 | A B C D | 59 | A B C D | 84 | A B C D |
| 10 | A B C D | 35 | A B C D | 60 | A B C D | 85 | A B C D |
| 11 | A B C D | 36 | A B C D | 61 | A B C D | 86 | A B C D |
| 12 | A B C D | 37 | A B C D | 62 | A B C D | 87 | A B C D |
| 13 | A B C D | 38 | A B C D | 63 | A B C D | 88 | A B C D |
| 14 | A B C D | 39 | A B C D | 64 | A B C D | 89 | A B C D |
| 15 | A B C D | 40 | A B C D | 65 | A B C D | 90 | A B C D |
| 16 | A B C D | 41 | A B C D | 66 | A B C D | 91 | A B C D |
| 17 | A B C D | 42 | A B C D | 67 | A B C D | 92 | A B C D |
| 18 | A B C D | 43 | A B C D | 68 | A B C D | 93 | A B C D |
| 19 | A B C D | 44 | A B C D | 69 | A B C D | 94 | A B C D |
| 20 | A B C D | 45 | A B C D | 70 | A B C D | 95 | A B C D |
| 21 | A B C D | 46 | A B C D | 71 | A B C D | 96 | A B C D |
| 22 | A B C D | 47 | A B C D | 72 | A B C D | 97 | A B C D |
| 23 | A B C D | 48 | A B C D | 73 | A B C D | 98 | A B C D |
| 24 | A B C D | 49 | A B C D | 74 | A B C D | 99 | A B C D |
| 25 | A B C D | 50 | A B C D | 75 | A B C D | 100 | A B C D |

DLS Technician's Certificate III

Answer Sheet 2 of 3

Please Circle Only One Letter Corresponding to Each Answer

101	A	B	C	D	126	A	B	C	D	151	A	B	C	D	176	A	B	C	D
102	A	B	C	D	127	A	B	C	D	152	A	B	C	D	177	A	B	C	D
103	A	B	C	D	128	A	B	C	D	153	A	B	C	D	178	A	B	C	D
104	A	B	C	D	129	A	B	C	D	154	A	B	C	D	179	A	B	C	D
105	A	B	C	D	130	A	B	C	D	155	A	B	C	D	180	A	B	C	D
106	A	B	C	D	131	A	B	C	D	156	A	B	C	D	181	A	B	C	D
107	A	B	C	D	132	A	B	C	D	157	A	B	C	D	182	A	B	C	D
108	A	B	C	D	133	A	B	C	D	158	A	B	C	D	183	A	B	C	D
109	A	B	C	D	134	A	B	C	D	159	A	B	C	D	184	A	B	C	D
110	A	B	C	D	135	A	B	C	D	160	A	B	C	D	185	A	B	C	D
111	A	B	C	D	136	A	B	C	D	161	A	B	C	D	186	A	B	C	D
112	A	B	C	D	137	A	B	C	D	162	A	B	C	D	187	A	B	C	D
113	A	B	C	D	138	A	B	C	D	163	A	B	C	D	188	A	B	C	D
114	A	B	C	D	139	A	B	C	D	164	A	B	C	D	189	A	B	C	D
115	A	B	C	D	140	A	B	C	D	165	A	B	C	D	190	A	B	C	D
116	A	B	C	D	141	A	B	C	D	166	A	B	C	D	191	A	B	C	D
117	A	B	C	D	142	A	B	C	D	167	A	B	C	D	192	A	B	C	D
118	A	B	C	D	143	A	B	C	D	168	A	B	C	D	193	A	B	C	D
119	A	B	C	D	144	A	B	C	D	169	A	B	C	D	194	A	B	C	D
120	A	B	C	D	145	A	B	C	D	170	A	B	C	D	195	A	B	C	D
121	A	B	C	D	146	A	B	C	D	171	A	B	C	D	196	A	B	C	D
122	A	B	C	D	147	A	B	C	D	172	A	B	C	D	197	A	B	C	D
123	A	B	C	D	148	A	B	C	D	173	A	B	C	D	198	A	B	C	D
124	A	B	C	D	149	A	B	C	D	174	A	B	C	D	199	A	B	C	D
125	A	B	C	D	150	A	B	C	D	175	A	B	C	D	200	A	B	C	D

DLS Technician's Certificate III

Answer Sheet 3 of 3

Please Circle Only One Letter Corresponding to Each Answer

- | | | | | | | | |
|-----|---------|-----|---------|-----|---------|-----|---------|
| 201 | A B C D | 226 | A B C D | 251 | A B C D | 276 | A B C D |
| 202 | A B C D | 227 | A B C D | 252 | A B C D | 277 | A B C D |
| 203 | A B C D | 228 | A B C D | 253 | A B C D | 278 | A B C D |
| 204 | A B C D | 229 | A B C D | 254 | A B C D | 279 | A B C D |
| 205 | A B C D | 230 | A B C D | 255 | A B C D | 280 | A B C D |
| 206 | A B C D | 231 | A B C D | 256 | A B C D | 281 | A B C D |
| 207 | A B C D | 232 | A B C D | 257 | A B C D | 282 | A B C D |
| 208 | A B C D | 233 | A B C D | 258 | A B C D | 283 | A B C D |
| 209 | A B C D | 234 | A B C D | 259 | A B C D | 284 | A B C D |
| 210 | A B C D | 235 | A B C D | 260 | A B C D | 285 | A B C D |
| 211 | A B C D | 236 | A B C D | 261 | A B C D | 286 | A B C D |
| 212 | A B C D | 237 | A B C D | 262 | A B C D | 287 | A B C D |
| 213 | A B C D | 238 | A B C D | 263 | A B C D | 288 | A B C D |
| 214 | A B C D | 239 | A B C D | 264 | A B C D | 289 | A B C D |
| 215 | A B C D | 240 | A B C D | 265 | A B C D | 290 | A B C D |
| 216 | A B C D | 241 | A B C D | 266 | A B C D | 291 | A B C D |
| 217 | A B C D | 242 | A B C D | 267 | A B C D | 292 | A B C D |
| 218 | A B C D | 243 | A B C D | 268 | A B C D | 293 | A B C D |
| 219 | A B C D | 244 | A B C D | 269 | A B C D | 294 | A B C D |
| 220 | A B C D | 245 | A B C D | 270 | A B C D | 295 | A B C D |
| 221 | A B C D | 246 | A B C D | 271 | A B C D | 296 | A B C D |
| 222 | A B C D | 247 | A B C D | 272 | A B C D | 297 | A B C D |
| 223 | A B C D | 248 | A B C D | 273 | A B C D | 298 | A B C D |
| 224 | A B C D | 249 | A B C D | 274 | A B C D | 299 | A B C D |
| 225 | A B C D | 250 | A B C D | 275 | A B C D | 300 | A B C D |

J

<End of Exam>

DLS Technician's Certificate III

Information Cover Sheet

Please print clearly

Name: _____

Address: _____

City: _____

State: _____ Zip or Postal Code: _____

Country (other than USA): _____

Telephone: _____

Fax: _____

- ♦ the above information is required for proper grading, and to receive proper credit. Tests with incomplete information **cannot** be processed.

Method of Payment

Please Check One

___ Personal or Business check for **\$50** (US)‡

___ MasterCard charge of \$50 (US). Card: _____

___ VISA charge of \$50 (US). Exp: __/__/__ Sig: _____

Mail to: **Dynamic Learning Systems, P.O. Box 402, Leicester, MA 01524 USA**

Fax to: **508-892-1482** (24 hrs/day, 7 days/week)

‡ mail *only* - tests without payment cannot be processed. No Purchase Orders.