"Learning is a treasure that will follow its owner everywhere." - *Chinese proverb*

Study Guide

Chapter Review Questions 5

Troubleshooting Guide 85

Course Glossary 101

Course Index 245

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Study Guide

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"If you know all the answers, you aren't asking enough questions". *Anonymous*

Chapter Review Questions

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VOLUME 1

CHAPTER 1

1. The first electronic computer was:

a. made in a garage in San Jose.
b. invented by Charles Babbage.
c. called ENIAC.
d. the Abacus.

answer: c

2. In the computer field, PC stands for:

a. Politically Correct.
b. Perfect Computing.
c. Personal Comfort.
d. Personal Computer.

answer: d

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3. What contributed to computers becoming smaller and more affordable?

a. The Transistor
b. The Integrated Circuit
c. Steve Wozniac
d. All of the above.

answer: d

True or False

1. Steve Jobs invented the first computer. *F*

2. ENIAC could only do math computations. *F*

3. IBM became successful because they kept the inner workings of their PC hardware secret. *F*

4. The first Apple Computers had wood cases. *T*

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CHAPTER 2

1. The four basic parts or functions of a computer are:

a. hard drive, monitor , keyboard and printer.
b. storage, applications, processing and input.
c. input, output, storage and processing.
d. processing, feedback, I/O and software.

answer: c

2. When the computer is off, data is stored in the:

a. Modem.
b. Hard drive.
c. RAM.
d. None of the above. Data is lost when the power is off.

answer: b

3. Windows is an example of:

a. an Operating System.
b. an Application.
c. a Monitor screen.
d. a rock band, the sequel to the Doors.

answer: a

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4. If you have 80 volts and 20 amps, the power is:

a. 100 watts.
b. 1600 watts.
c. 280 watts.
d. 820 watts.
e. 160 kilowatts.

answer: b

True or False

1. A printer is an example of an input device. *F*

2. Software is called software because it is made of flimsy material. *F*

3. RAM stands for Random Access Memory. *T*

4. Software is a set of instructions to make the computer perform a specific task. *T*

5. Electricity is the flow of Electrons. *T*

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CHAPTER 3

1. Another name for a PC is:

a. Desktop computer.
b. Mini-computer.
c. Eniac.
d. Abacus.

answer: a

2. ESD stands for:

a. Electronic System Device.
b. Electro-Static Discharge.
c. Enhanced Secure Data.
d. Electro-Spark Download.

answer: b

3. The first rule of computer safety is to:

a. find the capacitors.
b. grab hold of the chassis.
c. unplug the computer.
d. use ESD.

answer: c

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4. Before working around voltage you should remove:

a. your shoes.
b. eyeglasses.
c. rings and other jewelry.
d. a kidney or two.

answer: c

True or False

1. You can't get shocked inside a computer if the power switch is OFF. *F*

2. Standing in a puddle while working on a PC is perfectly safe if you've pulled the plug first. *F*

3. Zapping your computer hardware with even a little static electricity can be fatal to it. *T*

4. Capacitors store electricity and can even discharge electricity AFTER you unplug the computer. *T*

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CHAPTER 4

1. Firmware instructions are located in the:

a. hard drive.
b. RAM.
c. BIOS.
d. instruction manual.

answer: c

2. Changing data or putting it in a new place is called:

a. a read cycle.
b. a write cycle.
c. an AC cycle.
d. a digital cycle.

answer: b

3. Many components combined in a single part is:

a. an integrated circuit.
b. a chip.
c. an IC.
d. all of the above.

answer: d

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4. CPU stands for:

a. Computer Processing Unit.
b. Creative Power Union.
c. Central Processing Unit.
d. Common Processor Unity.

answer: c

5. The Power Supply converts Alternating Current into:

a. direct current.
b. disabled current.
c. dynamic current.
d. distilled current.

answer: a

6. The signal on the bus that tells everything else on the bus how fast to run is the:

a. clock.
b. timer.
c. read buffer.
d. none of the above.

answer: a

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CHAPTER 4 CONTINUED

7. Address Lines carry:

a. data.
b. power.
c. locations of where data is going next.
d. all of the above.

answer: c

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CHAPTER 5

1. The binary number 1001 equals what decimal number?

a. Eleven
b. Nine
c. One Thousand and One
d. Five

answer: b

2. The DIMM has:

a. either 30 or 72 pins.
b. separate signals to the pins on each side of the board.
c. tiny holes through the board at each pin.
d. a low-power bulb to light the motherboard.

answer: b

3. You can read but not write to the:

a. ROM.
b. RAM.
c. RUM.
d. BUS.

answer: a

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CHAPTER 5 CONTINUED

4. A megabyte is:

a. 1,048,576 bits.
b. 1,000,000 bits.
c. 32 bits.
d. none of the above.

answer: a

5. RAM stands for:

a. Readable Address Memory.
b. Random Access Memory.
c. Random Address Memory.
d. Readable Access Memory.

answer: b

6. In Binary, Zero represents:

a. Off.
b. On.
c. all of the above.
d. none of the above.

answer: a

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True or False

1. DIMM stand for Dual In-line Memory Module. *T*

2. Parity is a method for checking errors in RAM. *T*

3. Parity RAM has 7 chips on each module. *F*

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CHAPTER 6

1. A pie-shaped section of a disk is a:

a. cylinder.
b. track.
c. platter.
d. sector.

answer: d

2. The capacity of a standard floppy diskette is:

a. 144 bytes.
b. 1.44 megabytes.
c. 144 megabytes.
d. unlimited.

answer: b

3. A sector contains:

a. 1.44 megabytes.
b. 144 bytes.
c. 512 bytes.
d. 5.12 megabytes.

answer: c

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4. All the tracks under the heads at the same time make up:

a. a platter.
b. a cylinder.
c. a sector.
d. 1.44 megabytes.

answer: b

5. The highest quality CD-R is:

a. gold-gold.
b. silver-blue.
c. red-black.
d. green-gold.

answer: b

6. The movement of heads from one cylinder to the next is called a:

a. seek.
b. read.
c. write.
d. search.

answer: a

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CHAPTER 6 CONTINUED

7. How many tracks are on a 1.44MB Floppy Disk?

a. 80
b. 100
c. 10
d. 55.325

answer: a

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CHAPTER 7

1. The Serial Port uses a:

a. 25-pin female connector.
b. Universal Serial Bus.
c. 9-pin and 25-pin male connector.
d. 9-pin and 25-pin female connector.

answer: c

2. The Parallel Port uses a:

a. 25-pin female connector.
b. Universal Serial Bus.
c. 9-pin and 25-pin male connector.
d. 9-pin and 25-pin female connector.

answer: a

3. What does USB stand for?

a. Unified Serial Bus
b. Universal System Bus
c. Universal Serial Bus
d. Unusual System Bus

answer: c

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CHAPTER 7 CONTINUED

True or False

1. In a serial port, all of the wires are used to transmit data. *F*

2. The male end of a serial or parallel connection has pins sticking out. *T*

3. USB devices can be plugged in even when the computer is already turned on. *T*

4. You can connect up to 500 USB devices to a single USB port. *F*

5. The 'COM' in COM1 Port stands for 'communications'. *T*

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CHAPTER 8

1. The keyboard controller is located:

a. inside the keyboard.
b. on the motherboard.
c. in the serial port.
d. none of the above.

answer: b

2. CRT stands for:

a. Color Resolution Threshold.
b. Computer Remote Terminal.
c. Communication Response Throughput.
d. Cathode Ray Tube.

answer: d

3. Each of the dots making up an image is called:

a. a pixel.
b. a pixie.
c. an electron gun.
d. a bit.

answer: a

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CHAPTER 8 CONTINUED

True or False

1.	A keyboard connector has either 5 or 6 pins.	*T*
2.	640 x 480 pixels is a higher resolution than 1024 x 768 pixels.	*F*
3.	The deflection plates in a CRT are designed to control the monitor's brightness.	*F*
4.	The QWERTY keyboard is named for the first six letters on the keyboard.	*T*
5.	The word monochrome means one color.	*T*
6.	The filament is the heating device for the electron gun in a CRT.	*T*
7.	The trackpoint was invented by IBM.	*T*

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CHAPTER 9

1. The typewriter works like:

a. an impact printer.
b. a character printer.
c. both A and B.
d. neither A or B.

answer: c

2. A printer with print wires in the head is:

a. a laser printer.
b. a dot matrix printer.
c. a character printer.
d. an ink jet printer.

answer: b

3. DPI stands for:

a. digital print image.
b. download pixel index.
c. drum printer input.
d. dots per inch.

answer: d

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CHAPTER 9 CONTINUED

4. Which best describes how a laser printer works?

a. Laser light burns an image into the paper.
b. An image on the drum transfers to the paper.
c. The print head can do graphs as well as characters.
d. A laser melts wax onto the paper.

answer: b

5. Thermal printers:

a. use heat to transfer images to paper.
b. can print documents and tell you the room temperature.
c. are very very fast.
d. None of the above.

answer: a

6. The higher the DPI on a printer:

a. the longer it takes to print.
b. the higher quality the print.
c. the better the resolution.
d. All of the above.

answer: d

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CHAPTER 10

1. Computer peripherals include the:

a. scanner, printer and outside storage devices.
b. joystick, monitor and RAM memory.
c. modem, ZIP drive and video controller.
d. Speakers, CDR and BIOS.

answer: a

2. Outside storage devices are used for:

a. back-ups of important data.
b. freeing more space on the hard-drive.
c. transferring files too large for a floppy.
d. All of the above.

answer: d

3. MIDI stands for:

a. Musical Interface Digital Input.
b. Micro Image Data Input.
c. Musical Instrument Digital Interface.
d. Modem Information Device Index.

answer: c

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CHAPTER 10 CONTINUED

4. A NIC card is a:

a. Network Integration Card.
b. Network Interface Card.
c. Neural Innerspace Card.
d. Neurotic Impatient Child.

answer: b

5. A joystick normally connects to a:

a. game port.
b. serial port.
c. parallel port.
d. peripheral port.

answer: a

True or False

1. A scanner is a peripheral that can copy pictures into your computer. T

2. Phone lines carry binary signals. F

3. A recordable CD holds at least 640 megabytes. T

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CHAPTER 11

1. A token is used with:

a. a star network.
b. a ring network.
c. an ethernet bus.
d. a hub.

answer: b

2. Which would be part of a URL?

a. ISP
b. TCP/IP
c. .com
d. All of the above.

answer: c

3. Which would never have its own server?

a. A monitor
b. A printer
c. E-mail
d. Data files

answer: a

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CHAPTER 11 CONTINUED

4. Sneaker-net is:

a. a footrace for computer nerds.
b. a secret government network.
c. carrying data on floppy from one computer system to another.
d. password-protected.

answer: c

5. Ethernet is a _____ network.

a. token ring
b. bus
c. star
d. wireless

answer: b

6. TCP/IP is a:

a. protocol.
b. standard.
c. way for computers to communicate over the Internet.
d. all of the above.

answer: d

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7. A peripheral used just by one computer is called:

a. local.
b. global.
c. dedicated.
d. private.

answer: a

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CHAPTER 12

1. In preventive maintenance, it's most important to get rid of:

a. dust.
b. second-hand smoke.
c. vacuum cleaners.
d. spilled milk and cookie crumbs.

answer: a

2. Magnetic tapes and diskettes must be kept away from:

a. dust.
b. the computer cabinet.
c. the monitor.
d. spilled milk and cookie crumbs.

answer: c

3. The first step of troubleshooting is:

a. documentation.
b. narrowing the problem.
c. removing dust and heat.
d. milk and cookies.

answer: b

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4. Why is it important to document the problem and the solution?

a. It makes it easier to solve if you run into the same problem in the future.
b. It ensures that you don't make the same mistake twice.
c. You are more likely to remember the solution after writing it down.
d. All of the above.

answer: d

5. To prevent damage, it's most important to keep your computer away from:

a. heat.
b. loud noises.
c. pets.
d. milk and cookies.

answer: a

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VOLUME 2

CHAPTER 1

1. In an electrical outlet, the hot side is the one with:

a. the narrow slot and the black wire.
b. the narrow slot and the white wire.
c. the wide slot and the black wire.
d. the wide slot and the white wire.

answer: a

2. Ohm's Law can be used to find out:

a. resistance.
b. voltage.
c. current.
d. any of the above.

answer: d

3. The resistor in a wrist strap is to:

a. protect the components.
b. protect the technician.
c. connect to the chassis.
d. discharge capacitors.

answer: b

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4. ESD is worse in what conditions?

a. Hot and humid
b. Hot and dry
c. Cold and wet
d. Cold and dry

answer: d

5. To avoid ESD, you should:

a. wear leather-soled shoes.
b. clip your wrist strap to an insulated chassis part.
c. be at the same electrical charge as the computer.
d. shuffle your feet.

answer: c

6. Which should be transported in an anti-static bag?

a. A monitor
b. A video card
c. A keyboard
d. A power cord

answer: b

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CHAPTER 2

1. What voltage is used by the 486 CPU?

a. 3.3 VDC
b. 5 VDC
c. 12 VDC
d. 110 VAC

answer: b

2. What voltage is used by a Pentium CPU?

a. 3.3 VDC
b. 5 VDC
c. 12 VDC
d. 110 VAC

answer: a

3. What PCMCIA card type is used with hard drives?

a. Type 1
b. Type 2
c. Type 3
d. None. Hard drives are internal.

answer: c

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4. Which device typically uses IRQ 6?

a. Real-Time Clock
b. Floppy
c. COM1
d. COM2

answer: b

5. What component remembers the amount of installed memory when the computer is off?

a. BIOS
b. Hard Drive
c. CMOS
d. Memory Controller

answer: c

6. Which bus connector socket has 124 pins?

a. ISA
b. EISA
c. VESA
d. PCI

answer: d

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CHAPTER 2 CONTINUED

7. COM 1 uses:

a. IRQ 2 and I/O Port 02F8.
b. IRQ 3 and I/O Port 0278.
c. IRQ 4 and I/O Port 03F8.
d. IRQ 12 and I/O Port 02F8.

answer: c

8. COM 2 uses:

a. IRQ 2 and I/O Port 02F8.
b. IRQ 3 and I/O port 02F8.
c. IRQ 4 and I/O Port 02E8.
d. IRQ 13 and I/O Port 0378.

answer: b

9. Select all true statements:

a. COM 1 and COM 2 share the same IRQ.
b. COM 1 and COM 3 share an IRQ.
c. COM 2 and COM 4 share the same IRQ.
d. IRQs cannot be shared.

answer: b and c are both correct.

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CHAPTER 3

1. How much memory is in conventional memory?

a. 384 KB
b. 640 KB
c. 1 MB
d. 16 MB

answer: b

2. A parity error is most likely due to:

a. RAM.
b. ROM.
c. software.
d. segment addressing.

answer: a

3. If a slot has 168 pins, it takes:

a. a SIMM.
b. a DIMM.
c. SRAM.
d. cache.

answer: b

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CHAPTER 3 CONTINUED

4. The quickest access to data is provided by:

a. the Hard Drive.
b. DRAM.
c. SRAM.
d. ROM.

answer: c

5. A SIMM has how many pins:

a. 168
b. 1 MB
c. 40
d. 30 or 72

answer: d

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CHAPTER 4

1. What will eliminate small sags in the line voltage?

a. A UPS unit
b. A battery back-up unit
c. A surge protector
d. The Power Good signal

answer: a

2. Which voltage is not supplied by the AT power supply?

a. +5
b. -5
c. -12
d. +3.3

answer: d

3. The yellow wire from the power supply is used for:

a. +5VDC.
b. +12VDC.
c. +3.3VDC.
d. the +5VSB signal.

answer: b

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CHAPTER 4 CONTINUED

4. Current can be measured by:

a. a volt-ohm meter.
b. a digital multi-meter.
c. a high-voltage probe.
d. the Power Good signal.

answer: b

5. To measure a DC voltage, the meter leads should be:

a. red on positive, black on ground.
b. red on negative, black on ground.
c. black on positive, red on ground.
d. It doesn't matter.

answer: a

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CHAPTER 5

1. There is no picture but the monitor's power light is on. The first thing to check is the:

a. CRT.
b. video controller.
c. cables.
d. monitor settings.

answer: d

2. Electrons have:

a. a positive charge.
b. a negative charge.
c. no charge.
d. an attraction to negative charge.

answer: b

3. The pattern of an electron beam in a CRT is a:

a. grid.
b. refresh.
c. raster.
d. flyback.

answer: c

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CHAPTER 5 CONTINUED

4. A CRT is discharged from the:

a. electron gun.
b. raster.
c. anode.
d. flyback transformer.

answer: c

5. The first standard for color video in PCs was:

a. AGP.
b. CGA.
c. EGA.
d. VGA.

answer: b

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CHAPTER 6

1. To install a second IDE hard drive, you should:

a. put the 2nd drive on the Secondary cable.
b. designate it in CMOS as Drive D.
c. set it as Slave on the Primary cable.
d. Only one IDE hard drive is allowed,

answer: c

2. What is true about SCSI IDs?

a. SCSI devices must have the same ID as the Host.
b. Each SCSI device must have its own unique ID.
c. SCSI IDs are Primary Master, Primary Slave, Secondary Master and Secondary Slave.
d. SCSI uses a Host Adapter, not IDs.

answer: b

3. The message "Invalid Media" appears after installing a new hard drive. What was omitted?

a. The FORMAT command
b. The FDISK command
c. Jumpering the drive
d. Nothing. It must be a defective disk.

answer: a

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CHAPTER 6 CONTINUED

4. When connecting a second external SCSI drive, its cable goes to:

a. the SCSI Host Adapter card.
b. the Parallel Port connector.
c. any open port connector on the motherboard.
d. an open port on the first SCSI drive.

answer: d

5. There is one IDE device, a hard drive on the primary cable. To add an IDE CD-ROM, install it as a:

a. Primary Slave.
b. Secondary Master.
c. Secondary Slave.
d. Secondary Single Drive.

answer: d

6. Which of these uses duplexing?

a. RAID 0
b. RAID 1
c. RAID 2
d. RAID 5

answer: b

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CHAPTER 7

1. During the fusing step, toner is:

a. sprayed onto the paper.
b. transferred from the drum to the paper.
c. melted.
d. given a negative electrical charge.

answer: c

2. On a dot matrix printer, you should never lubricate:

a. the carriage rails.
b. the print wires.
c. the tractor-feed roller bearings.
d. the platen assembly.

answer: b

3. During a laser printer's conditioning step:

a. the corona wire gives the paper a positive charge.
b. the drum is scraped free of old toner.
c. the toner is given a negative charge.
d. the drum is given a negative charge.

answer: d

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CHAPTER 7 CONTINUED

4. In order, the steps of the EP process are:

a. conditioning, developing, transfer, fusing, cleaning.
b. cleaning, conditioning, developing, transfer, fusing.
c. cleaning, conditioning, writing, developing, transfer, fusing.
d. cleaning, charging, conditioning, transfer, fusing.

answer: c

5. Toner is applied to the drum by which part?

a. Fuser roller
b. Developer roller
c. Transfer corona wire
d. Conditioner

answer: b

6. A print head using a crystal to expel ink is called:

a. piezo-electric.
b. bubble-jet.
c. thermal.
d. serial.

answer: a

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7. Which laser printer components can be dangerous with power off? Check all that apply.

a. corona wire.
b. laser lens.
c. photosensitive drum.
d. fuser assembly.

answer: a, c and d are all correct.

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CHAPTER 8

1. Modems transmit:

a. digitally.
b. synchronously.
c. asynchronously.
d. in AT mode.

answer: c

2. Sound cards typically use:

a. IRQ 7 and no DMA.
b. DMA 7 and no IRQ.
c. IRQ 3 and DMA 7.
d. IRQ 5 and DMA 5.

answer: d

3. To completely test the serial or parallel port you would use:

a. a Null Modem cable.
b. a logic probe.
c. a loopback plug.
d. an ohm-meter.

answer: c

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4. The USB connector has how many pins?

a. 4
b. 15
c. 40
d. 68

answer: a

5. The UART is part of the:

a. serial port.
b. parallel port.
c. USB port.
d. sound card.

answer: a

6. Which statements about serial ports are true?
Check all that apply.

a. It uses a 9-pin or 25-pin female connector.
b. It uses the RS-232C standard.
c. COM 3 uses IRQ 4.
d. It always uses just one start bit.

answer: b, c and d are all true.

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CHAPTER 8 CONTINUED

7. Half duplex means the port:

a. shares an IRQ.
b. can either send or receive, not both.
c. can send and receive, but not at the same time.
d. can send and receive simultaneously.

answer: c

8. JPEG files are mainly used for:

a. compressed motion picture images.
b. vector graphic images.
c. compressed bitmap images.
d. uncompressed bitmap images.

answer: c

9. The Line In jack on a sound card is for:

a. input to a tape recorder or amplifier.
b. input from a radio, tape, etc.
c. output to the stereo speakers.
d. sound from the CD-ROM.

answer: b

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10. The IEEE standard for Firewire is:

a. 1023.
b. 1394.
c. 1492.
d. 64449.

answer: b

CHAPTER 9

1. Twisted pair cable uses which connector?

a. RA-50
b. BNC
c. D-15
d. RJ-45

answer: d

2. What is the maximum length for thin coax?

a. 100 feet
b. 100 meters
c. 200 meters
d. 1000 feet

answer: c

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CHAPTER 8 CONTINUED

3. The best protection from EMI is provided by:

a. shielded twisted pair.
b. thin coax.
c. thick coax.
d. fiber optics.

answer: d

4. Check all that apply. Two LANs can be connected by a:

a. bridge.
b. switch.
c. router.
d. frame relay.

answer: a, b, c and d are all correct.

5. In the OSI model, data is broken into packets in the:

a. session layer.
b. network layer.
c. transport layer.
d. data link layer.

answer: c

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6. Which protocol would be most needed on an e-mail server?

a. FTP
b. NWLink
c. PPP
d. SMTP

answer: d

7. Which protocol is used for dynamic addressing?

a. DNS
b. DHCP
c. IMAP
d. HTTP

answer: b

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CHAPTER 10

1. When is a laptop not a notebook computer?

a. When it has a clamshell design.
b. When it's a tablet PC.
c. Laptop and notebook mean the same thing.
d. When it uses a port replicator.

answer: b

2. Which battery are you most likely to find in a new laptop?

a. NiCAD
b. NiMH
c. Lithium ion
d. Lithium polymer

answer: c

3. Which of these requires opening the case to install?

a. A miniPCI card
b. A PCMCIA card
c. A USB flash drive
d. A docking station

answer: a

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4. Which of these would you probably NOT find in a laptop?

a. 168-pin DIMM
b. 144-pin microDIMM
c. 72-pin SoDIMM
d. Smart Media card

answer: a

5. A message handwritten on a tablet screen can be saved as a text file by using:

a. OCR software.
b. a port replicator.
c. a hybrid keyboard.
d. a hybrid keyboard.

answer: a

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CHAPTER 11

1. To overclock the CPU but not the RAM, you would increase the speed of the:

a. PCI bus.
b. front-side bus.
c. clock multiplier.
d. AGP bus.

answer: b

2. If the clock speed is 100 MHz and the clock multiplier is 2.5, the CPU clock speed is:

a. 40 MHz.
b. 250 MHz.
c. 2.5 GHz.
d. 4 GHz.

answer: b

3. The most effective CPU cooling is from:

a. phase cooling.
b. Peltier cooling.
c. a passive heat sink.
d. the HSF.

answer: a

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4. SATA refers to the latest:

a. IDE technology.
b. SCSI interface.
c. video memory.
d. CPU cooling device.

answer: a

5. A vector shader is found in:

a. RAM-DAC
b. a water-cooled CPU.
c. a GPU
d. a DVI monitor.

answer: c

6. CAD/CAM will most often use:

a. floating-point color.
b. a Peltier device.
c. a plotter.
d. a pixel shader.

answer: c

7. PDA stands for:

a. Peltier Device Adjustment.
b. Personal Digital Assistant.
c. Phase Dynamic Accelerator.
d. Parallel Digital ATA.

answer: b

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VOLUME 3

CHAPTER 2

1. Which are the valid DOS wildcards?

a. % and ?
b. # and *
c. * and ?
d. ? and #

answer: c

2. The main advantage of XCOPY over COPY is:

a. it copies directories.
b. it copies hidden and read-only files.
c. it copies larger files.
d. nothing. They work exactly the same.

answer: a

3. Which symbols are all forbidden in DOS file names?

a. < > @ % * !
b. > ; \ [? +
c. % ? > # + >
d. # = $ \ /]

answer: b

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4. DOS would truncate the long filename
   A Favorite File.for.me in what way?

a. AFAVOR.FOR
b. AFAVOR~1.ME
c. AFAVORIT.FOR
d. A_FAVO~1.ME

answer: b

5. In the command DIR C:\DIR1\DIR2\DIR3,
   which statements are true? Check all that apply.

a. DIR1 is the parent directory of DIR2.
b. DIR1 will be copied to DIR2 and DIR3.
c. DIR1 is a subdirectory of the C-drive root directory.
d. The command will list the contents of DIR1.

answer: a and c are correct.

6. To display a file on the screen, the command is:

a. DISPLAY.
b. DIR.
c. TYPE.
d. COPY.

answer: c

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CHAPTER 2 CONTINUED

7: If you try to edit a file and DOS says ACCESS DENIED, the file is:

a. Hidden.
b. Read Only.
c. System.
d. Archive.

answer: b

8. To cancel a DOS command, use:

a. Ctrl C.
b. Escape.
c. Alt Tab.
d. Enter.

answer: a

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CHAPTER 3

1. What key allows bypassing CONFIG.SYS and AUTOEXEC.BAT during boot-up?

a. F1
b. F5
c. F8
d. Escape

answer: b

2. What key allows step-by-step confirmation of CONFIG.SYS and AUTOEXEC.BAT

a. F5
b. F8
c. F11
d. Ctrl

answer: b

3. What does TSR stand for?

a. Terminal Set Ready
b. Terminate and Stay Resident
c. Testing System Ready
d. Temptation Still Ripe

answer: b

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CHAPTER 3 CONTINUED

4. What executes the statements in AUTOEXEC.BAT?

a. IO.SYS
b. MSDOS.SYS
c. COMMAND.COM
d. CONFIG.SYS

answer: c

5. PATH = will be found in which file?

a. COMMAND.COM
b. CONFIG.SYS
c. AUTOEXEC.BAT
d. MSDOS.SYS

answer: c

6. You've just upgraded DOS and an old application won't run. What do you do?

a. Run the SETVER command.
b. Delete the application.
c. Reinstall the application.
d. Reinstall the DOS upgrade.

answer: a

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CHAPTER 4

1. To make a formatted diskette into a bootable diskette:

a. re-format the diskette, using /B.
b. run FDISK A:.
c. run SYS A:.
d. throw it out and format another diskette.

answer: c

2. DOS=HIGH,UMB in CONFIG.SYS will:

a. load the DOS kernel into the upper memory area.
b. use a later version of DOS.
c. load the DOS kernel into the top of expanded memory.
d. load the DOS kernel into high memory.

answer: d

3. Which files are essential on a DOS boot disk?

a. MSDOS.SYS, COMMAND.COM, CONFIG.SYS
b. AUTOEXEC.BAT, IO.SYS, COMMAND.COM
c. CONFIG.SYS, IO.SYS, COMMAND.COM
d. MSDOS.SYS, COMMAND.COM, IO.SYS

answer: d

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CHAPTER 4 CONTINUED

4. Where would you most likely see the statement loading EMM386.EXE?

a. AUTOEXEC.BAT
b. CONFIG.SYS
c. Extended memory
d. In a floppy boot sector

answer: b

5. Which mode allows two simultaneous applications in RAM?

a. Protected
b. Unprotected
c. Real
d. Virtual

answer: a

6. HIMEM.SYS is a what?

a. System boot file
b. Expanded memory manager
c. Memory driver
d. TSR

answer: c

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7. Protected mode is needed to use:

a. expanded memory.
b. extended memory.
c. conventional memory.
d. upper memory.

answer: b

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CHAPTER 5

1. Which filenames are valid in Windows 9x? Check all that apply.

a. Spam/toast.yum
b. Spam for breakfast.menu
c. Spam,Spam,Spam
d. E-mail Spam? No way.Jose

answer: a, b and c are correct

2. The feature called My Briefcase is used to:

a. store a laptop while traveling.
b. hold deleted files in case you want them again.
c. update files changed on another computer.
d. hold accessory files.

answer: c

3. The maximum size of a Windows 9x filename is:

a. 8 characters plus 3-character extension.
b. 32 characters plus 3-character extension.
c. 255 characters plus extension.
d. 255 characters total.

answer: d

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4. Which features can be accessed from the Start menu?

a. Shut Down, Program Menu, Printer Settings
b. Documents, Recycle Bin, Taskbar Settings
c. My Computer, Shut Down, Briefcase
d. Shut Down, My Computer, Help

answer: a

5. An icon can represent:

a. a utility program.
b. an application file or data file.
c. a shortcut to a file.
d. all of the above.

answer: d

6. The Start Menu is found:

a. by pressing F5 during boot-up.
b. under Accessories.
c. by opening My Computer.
d. on the Taskbar.

answer: d

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CHAPTER 6

1. Which file is required to start Windows 9x?

a. WIN.SYS
b. WIN.BAT
c. WIN.COM
d. WIN.EXE

answer: c

2. Which file is a back-up Registry file?

a. SYSTEM.BAK
b. USER.BAK
c. USER.DA0
d. Both a and b

answer: c

3. If an application freezes, you first:

a. press the Reset button.
b. choose Restart from the shut-down menu.
c. boot from a system diskette.
d. press Ctrl Alt Del, select the application and End Task.

answer: d

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4. Windows 9x requires which files on a boot disk?

a. COMMAND.COM, DRVSPACE.BIN, IO.SYS, MSDOS.SYS
b. IO.SYS, MSDOS.SYS, WIN.COM, COMMAND.COM
c. IO.SYS, COMMAND.COM. WIN.COM, DRVSPACE.BIN
d. SYSTEM.DAT, IO.SYS, COMMAND.COM, WIN.COM

answer: a

5. Which drivers are loaded in Safe Mode?

a. SVGA, mouse, keyboard and sound card
b. Keyboard, mouse and printer
c. Keyboard, mouse and VGA
d. Everything except video and sound card

answer: c

6. What is the Windows command interface?

a. WIN.COM
b. COMMAND.COM
c. Explorer
d. SYSTEM.COM

answer: c

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CHAPTER 6 CONTINUED

7. Windows 9x uses what kind of multitasking?

a. Cooperative
b. Preemptive
c. Protected
d. Virtual

answer: b

8. How can you access the boot-up menu?

a. Press Ctrl Alt Del.
b. Select Restart from the Shut-down menu.
c. Press the F5 key before Windows loads.
d. Press the F8 key before Windows loads

answer: d

9. Which is the correct UNC to map a network drive?

a. //computername/sharename
b. \\sharename\computer name
c. \\computername\sharename
d. \computername | sharename

answer: c

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10. Double-clicking on a .REG file will:

a. open the file.
b. delete the file.
c. start REGEDIT.
d. place the file's contents in the Registry.

answer: d

CHAPTER 7

1. The file DETLOG.TXT lists what?

a. Desktop settings
b. System startup commands
c. The reason for installation failure
d. Detected hardware

answer: d

2. If you suspect problems with the Spooler, you should:

a. reboot the system.
b. select Print directly to printer.
c. select EMF as the spool data format.
d. change the port used by the printer.

answer: b

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3. To check a drive's free space:

a. open My Computer, double-click the drive icon.
b. right-click the drive icon in Explorer, select Properties.
c. open DriveSpace under Accessories.
d. double-click the drive icon in Device Manager.

answer: b

4. To find a graph of memory usage, use:

a. the Resources tab of Device Manager.
b. the System icon in Control Panel.
c. System Monitor in the System Tools group.
d. the Resource Meter.

answer: c

5. In Device Manager, a yellow ! appears next to the network card. This may indicate:

a. a resource conflict.
b. the NIC is transmitting.
c. the network cable is disconnected.
d. the network card is missing.

answer: a

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6. To create a start-up disk after Windows is installed:

a. find 'Start-up Disk' on the Windows CD.
b. use COPY DISK in Explorer.
c. copy the Windows folder to a formatted floppy.
d. use Add/Remove Programs in Control Panel.

answer: d

7. To move an EXE file to another folder on the same drive:

a. drag the file to the new folder.
b. drag the file while holding the Ctrl key.
c. drag the file while holding the Shift key.
d. drag the file while holding Ctrl and Shift keys.

answer: c

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CHAPTER 8

1. Windows NT checks disks with:

a. DSKCHK.
b. CHKDSK.
c. SCANDISK.
d. SMARTDRV.

answer: b

2. NT runs DOS programs in:

a. real mode.
b. conventional memory.
c. a VDM.
d. a page file.

answer: c

3. Which registry key contains device driver data?

a. HKEY_CLASSES_ROOT
b. HKEY_DEVICE_DRIVERS
c. HKEY_LOCAL _MACHINE
d. HKEY_CURRENT_CONFIG

answer: c

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4. Running multiple subroutines in one application is called:

a. multitasking.
b. multithreading.
c. symmetric multiprocessing.
d. asymmetric multiprocessing.

answer: b

5. A logical drive that includes space on more than one physical drive is called:

a. an extended partition.
b. a decompressed volume.
c. a volume set.
d. thrashing.

answer: c

6. On the NT system, Permissions control:

a. access to desktop and system settings.
b. access to files and folders.
c. group privileges.
d. all of the above.

answer: b

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7. When leaving an NT system for a short time, it's best to use:

a. Logoff.
b. Shutdown.
c. Screensaver Password.
d. Lock.

answer: a

8. Which file writes hardware data into the registry at boot-up?

a. NTLDR.
b. NTDETECT.COM.
c. BOOT.INI.
d. NTOSKRNL.EXE

answer: a

9. If a system component fails, the details will most likely be found in:

a. Performance Monitor.
b. Task Manager Processes Tab.
c. Event Viewer System Log.
d. Diagnostics Display Tab.

answer: c

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10. To upgrade Windows 3.1 to Windows NT, use:

a. SETUP.EXE.
b. INSTALL.INI.
c. WINNT.EXE.
d. WINNT32.EXE.

answer: c

11. NT does not support which of these hardware systems?

a. ATX
b. RISC
c. XT
d. PS/2

answer: c

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CHAPTER 9

1. A Common Application is:

a. installed on all systems in a network.
b. installed without user restrictions.
c. needed by the operating system.
d. available in stores everywhere.

answer: b

2. To set up unattended defragmentation in Win2K:

a. use Disk Administrator.
b. go to System Tools\Defrag.
c. go to Control Panel\Scheduled Tasks.
d. use the Tools menu in Explorer.

answer: c

3. To reach Device Manager in Windows 2000:

a. right-click on My Computer.
b. open Add\Remove Hardware.
c. select Devices from the Explorer Tools menu.
d. open Computer Manager\System Tools.

answer: d

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4. To create a WIN2K printer pool:

a. click 'Enable Printer Pooling' from the Ports tab of any printer's property sheet.
b. go to Settings\Printers\Multitasking.
c. go to Settings\Printers\Enable Pooling.
d. connect the printers to a hub.

answer: a

5 To change the permissions on a file you must:

a. first open the file.
b. first take ownership of the file.
c. have unrestricted privileges to the file.
d. Only the administrator can change file permissions.

answer: b

6. To retrieve the results of a crash dump you would:

a. open Event Viewer.
b. view CRASHLOG.TXT.
c. reboot in Debug Mode.
d. run DUMPEXAM.EXE.

answer: d

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7. Win2K won't boot up after your last change to the registry. The next thing to try is to:

a. boot up with a DOS boot disk.
b. boot up in Safe Mode to Last Known Good Configuration.
c. check the NTBTLOG.TXT file.
d. reinstall the operating system.

answer: b

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Troubleshooting Guide

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Following is a list of some of the more common problems and what to look for. It is not intended to be a complete list, either of problems or their causes. Also, unless stated otherwise it is assumed that the system was previously working OK.

BOOT-UP PROBLEMS

The system powers up OK but crashes soon after. It can boot up again after being turned off for a few minutes.

This is almost always due to overheating. Clean out the dust, and check that the system fan and CPU fan are working properly.

At boot-up, the screen message says "No Operating System Found".

This is most often a loose hard drive cable, especially if you've just moved the computer. Less often it will be a defective hard drive, a virus in the Master Boot Record or incorrect BIOS settings. If the cable checks OK, you can use Micro-Scope's Hard Drive Editor to check for the boot signature 55AA (in Cylinder 0, Head 0, Sector1). In the case of a boot virus, you can run FDISK/MBR from the Emergency Boot Disk. This will create a new generic Master Boot Record and let you get the show on the road.

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Windows 9x won't boot up.

Try booting to Safe Mode. If that fails, boot to DOS from a floppy system disk and look for the Windows system files on the C drive. If the floppy won't boot either, the problem is not software but hardware, and a Post Reader card can be used to narrow it down.

The system reboots itself periodically for no reason.

Very rarely this will be from faulty Reset circuitry on the motherboard, but more often comes from a noisy power supply or AC line. The first line of defense is a good surge protector, but the power supply filters must also be functioning correctly.

GENERAL SYSTEM ERROR MESSAGES

Error in CONFIG.SYS line XX.

This usually results from either a misspelling or syntax error in that line of CONFIG.SYS, or the file referred to in that line is missing.

Bad or missing COMMAND.COM.

This serious error in Windows 9x can result from a virus, or from deleting or overwriting the Command.com file in the root directory. Use the Emergency Boot Disk to run an anti-virus program and to replace the Command.com file.

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HIMEM.SYS is Missing.

Most often this will result from booting to Safe Mode Command Prompt Only, and then trying to get to Windows by typing WIN on the command line. HIMEM.SYS didn't get loaded because the startup files were bypassed. Since extended memory can't be used without HIMEM.SYS, Windows will not run in this configuration. Booting up normally (either warm or cold) will bring back HIMEM.SYS. For the once-in-a-blue-moon when HIMEM.SYS is actually missing, it can be restored from the Emergency Boot Disk.

A device referenced in SYSTEM.INI, WIN.INI, Registry is not found.

Most often, this error results because an old program or hardware device was uninstalled incorrectly and left a reference to its driver. Start the system in Safe Mode if necessary, and remove the reference by editing the SYSTEM.INI and WIN.INI files. This can be done most easily by typing SYSEDIT on the Run command line. To edit the Registry, use Regedit (only as a last resort). To avoid this type of problem in the future, always use the Add/Remove Programs and Add/Remove Hardware wizards. Don't just pull out a device or delete an application's Program file.

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The Blue Screen of Death Appears.

Several messages can occur showing white letters on a blue background, usually containing a phrase such as "Illegal Operation" or "General Protection Fault" or "Windows Protection Error". These all result from some conflict between applications or between an application and the operating system and there are too many different versions and causes to list here, but the message will usually contain a code or module number allowing you to look it up in Microsoft's Knowledge Base or other web resources. This is worth doing if the same error keeps showing up; otherwise the usual solution is to reboot and hope you never see it again.

Keep in mind if you just made a major change to some part of the system (such as installing a new application or opening a couple of humongous files), that should be your prime culprit. You can also use Dr. Watson or the Win2K Event Log to get more data about the failure.

One of these messages appears (in Win2K) - System Log is Full, or Application Log is Full, or Security Log is Full:

Open the Event Viewer (under Administrative Tools) and select the appropriate log file. Under Action, choose Save File As (if you want to save the log data), then select Clear All Events. Of course you might also want to correct the situation that caused the log to fill up.

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FLOPPY PROBLEMS

A floppy disk reads in one system but not in another.

One of the systems has floppy heads that are dirty or out of alignment. If the disk only reads in the floppy where it was written, that is probably the one out of alignment.

A floppy disk shows the contents of a previous diskette, not the one currently in place.

A signal on Pin 34 of the floppy cable tells the floppy controller when a diskette is changed. Look for damaged pins on either end of the cable. If these are OK, the controller may be defective or the disk-change sensor in the floppy drive itself may have been damaged.

Can't read or write to floppy drive, but the drive light is on steady.

Floppy cable connector is reversed, either at the drive or the motherboard. Make sure that Pin 1 matches the red wire on both ends.

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HARD DRIVE PROBLEMS

A new 20GB hard drive was installed, but the system doesn't see it (or sees only part of it).

The BIOS needs to be upgraded, because the older BIOS versions have a limit of 16,384 cylinders and do not see anything over that.

A second hard drive was added to the Primary IDE channel, but now neither of the drives is working.

First check the cable, which may have been loosened during the installation. If that's OK, make sure the second drive was jumpered as a Slave, because there is already a Master on that channel.

Since replacing the hard drive, I've been seeing "Drive Not Ready" errors during boot-up. When I hit the reset button, the system boots up OK.

The new (larger) drive needs more time to spin up to proper speed, that's all. There is usually a setting for this in the CMOS.

I replaced an old 420MB drive with a new 100GB drive and it doesn't work.

It's always possible that the new drive is faulty, but what is far more likely is that the BIOS in your old system isn't able to deal with the larger drive size. It's time for a BIOS upgrade at least, and probably a new system.

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I can hear the hard drive being accessed repeatedly, and I'm not opening or saving any files.

This is actually an operating system problem, called thrashing. It occurs because the swap file size is set too small.

CD-ROM

After installing a new CD-ROM drive, the entire system seems much slower.

This happens when a CD-ROM is installed as a slave on the same primary IDE channel as the C: drive. The two devices compete for use of the channel, slowing down both. Install the CD-ROM as a Secondary Master or Secondary Stand Alone and the problem should go away.

After installing Windows, the CD-ROM no longer works under DOS.

During the Windows installation, it will REM out the line in AUTOEXEC.BAT that references MSCDEX.EXE. Assuming everything else was correctly configured before, removing the REM should put you back in business.

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SCSI ERRORS

Device Not Ready.

Try turning on the device before booting the system.

Time-out.

Check the cables and terminations. If the timeout still occurs, disconnect all SCSI devices and reconnect one at a time to find the defective device.

A SCSI CD-ROM drive works on one system but not another, although both systems have other SCSI devices operating correctly.

There may be a duplicate SCSI ID# in use on the problem system. It also could be a cabling issue: excess length or cable not properly terminated.

Sometimes the system doesn't see my SCSI scanner. If I reboot, it shows up.

Make sure any external SCSI devices are turned on before booting the system.

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MEMORY

A new memory module was installed but the system doesn't see it.

With SIMMs, one module may not be enough to complete a bank. RAM must be installed in full-bank increments. It is also important to make sure the modules match in speed, parity and other characteristics. Also, in some really old systems it may be necessary to manually enter into CMOS the new amount of total RAM.

A DIMM module works in one machine but not in another. Just as with SIMMs, DIMM modules can vary in size, speed and other characteristics. Make sure the module matches the others in the system. If it does, it may be that one of the systems has marginal refresh timing.

PRINTER PROBLEMS

A job sent to the network printer is not printing.

If there are no symptoms except that the job doesn't print, click on the printer icon (under Settings/Printers) to see a list of all jobs in the spooler queue. The one at the top of the list may be hung up, and must be cancelled by the originator or the system administrator.

If you received a prompt that the printer is unavailable, make sure the printer is turned on, is online and shared, make sure the user is logged in, then check network and printer cables.

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The job prints out but shows garbage, or else some of the formatting, characters or graphics are changed.

Make sure you are using the right printer driver for the printer in question.

LASER PRINT PROBLEMS

No print. Page is all white.

This could be a broken transfer corotron or laser assembly. If this is the first page on a new cartridge, make sure the tape has been removed.

Page is mostly black.

Broken charge corotron or cartridge is spewing excess toner. Either is usually fixed by replacing the cartridge. Wipe up loose toner if necessary.

Vertical white lines.

Developer roller needs cleaning.

Black marks repeated across page.

Dirt or debris on drum or rollers. Sometimes this can be fixed by running a few blank pages through the printer.

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Gray or faded print.

Toner is low or the drum is wearing out.

Print faded on one side of page.

Toner is getting low. Shaking the cartridge may allow additional copies before it must be replaced.

Loose toner powder or print smudges easily.

Defective fuser.

Paper jams repeatedly.

Use a paper grade designed for laser printers. Don't overfill the paper tray, and fan the paper to separate stuck sheets. If reusing paper that has already been through the printer, give it time to cool first. If paper continues to jam, check roller adjustments and alignment of paper tray.

MONITOR SYMPTOMS

Screen is black.

Possible causes include: No power, signal cable disconnected (or less often, defective), brightness is turned completely down, or there is no output from the PC.

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Picture is dim and faded, even at maximum brightness.

The CRT is wearing out, and it's time for a monitor upgrade. Or, the screen is very, very dirty.

Picture goes off edge of screen.

Horizontal size or centering is out of adjustment or the focusing coil has too much resistance, usually due to age.

Can't set desired resolution or color range.

This could be the wrong video driver, or there is not enough video RAM to support the higher color/resolution combo.

Picture size fluctuates.

This is from a defective monitor power supply, or major fluctuations in AC input power.

Wavy lines or snow on screen.

There is noise interference from nearby electrical devices.

Color halo around text or images.

The monitor needs degaussing. See the monitor's manual for degaussing instructions.

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NETWORK ACCESS

A system is unable to access the Client-Server network.

In order of probability, the likeliest causes are a loose or defective network cable, the server is down, a failed NIC card, or a failed hub. Or, the password is being entered incorrectly.

SOFTWARE INSTALLATION PROBLEMS

Windows 9x won't install.

Check the last entry in the Setuplog.txt file to see what install step was being attempted. If the problem is missing or defective hardware, the Detlog.txt file will show what hardware the OS is expecting to find.

Windows 9x installed OK but can't see the network.

First check the network cable at both ends, and look at the Netlog.txt file which contains a record of the network configuration during the install. If everything is OK check out the NIC card, first for conflicts and then for hardware failure.

After installing a simple kid's game on the system, it has started locking up at random, even when that game isn't running.

Many simple DOS-based games arbitrarily change the video settings, and the mismatch between the settings and the hardware can cause random system crashes. Sometimes the only solution is to remove the game and revert to the original settings.

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HARDWARE INSTALLATION PROBLEMS

I replaced an adapter card with one that was working perfectly in another system, but now I get all kinds of strange errors.

Check Device Manager for a resource conflict. If possible, set the new card to the same settings as the old card. Otherwise, use Micro-Scope to get a list of all the resource assignments, and pick available ones for the new card.

I put in a new sound card of a very popular brand, but Windows says it can't find files needed for the installation.

The sound card is more recent than your version of Windows, so the drivers were not included in the Windows driver library. If you bought the card new there should have been a disc included that will have the files. Otherwise, you'll need to download the files from the website of the sound card manufacturer or scrounge them from your buddies.

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