

# IT Essentials: PC Hardware and Software

## Final Exam Study Guide

1. What was ARPAnet?
2. Convert the following binary numbers to decimal.  
11101101  
10001011
3. Convert the following binary numbers to hexadecimal.  
10101111  
11001101
4. What is Hertz used to measure?
5. What voltages are produced by a power supply?  
AT  
ATX
6. Describe these power connections?  
P1  
P8, P9  
Molex  
Berg
7. When should you **not** wear a wrist strap when working on a computer?
8. What is RAMDAC?
9. What is an AGP slot used for?
10. How and what is a multimeter used for?
11. List the IRQs for the following:  
COM1  
COM2  
COM3  
COM4  
LPT1  
Keyboard  
Floppy Drive
12. How many IRQs do modern computers have?
13. What is DMA?
14. List the I/O addresses for the following:  
COM1  
COM2  
COM3  
COM4  
LPT1  
LPT2

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15. What are two common form factors for motherboards?
16. What does the colored stripe on a ribbon cable represent?
17. How many pins does a floppy drive data cable have?
18. How many pins does an IDE hard drive data cable have?
19. Describe the following types of memory?
  - SIMM
  - DIMM
  - RIMM
  - DRAM
  - SRAM
  - EDO
  - DDR
  - ECC
20. What type of memory is used for cache memory?
21. How is CMOS maintained in a computer?
22. Describe the following:
  - Multi-user
  - Multi-tasking
  - Multi-processing
  - Multi-threading
23. Describe the following basic DOS command:
  - DIR
  - CD
  - MD
  - RD
  - COPY
  - FDISK
  - SCANDISK
  - REN
24. Which file is responsible for loading device drivers in DOS?
25. Which files does DOS require to boot a computer?
26. What DOS files contains the internal DOS commands?
27. What boot up functions moves the master boot record into RAM?
28. What are the following file extensions used for:
  - .txt
  - .exe
  - .com
  - .sys

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29. Name the two Windows 95 registry files.
30. What does the command FDISK /MBR do?
31. How much disk space is required for a complete install of:
  - Windows 98
  - Windows 2000
  - Windows XP
32. How much memory is required to run:
  - Windows 98
  - Windows 2000
  - Windows XP
33. What is the minimum processor required to run:
  - Windows 98
  - Windows 2000
  - Windows XP
34. Describe the following:
  - JPEG
  - MPEG
35. What do the numbers 32 and 64-bit refer to on a sound card?
36. Describe the following:
  - Serial
  - Parallel
  - USB
  - Firewire
  - SCSI
37. Describe the following types of ports?
  - DB9
  - DB25M
  - DB25F
  - RJ-45
  - RJ-11
  - PS/2
  - DIN-5
38. What devices are hot-swappable?
39. When referring to CD-ROMs speed, what does each x represent?
40. Describes the types of PCMCIA cards and how they are used?
  - Type I
  - Type II
  - Type III

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41. Describe the following:
- Sector
  - Cluster
  - Cylinder
  - Track
  - Bit
  - Byte
  - Kilobit
  - Megabit
  - Gigabit
42. Describe these file systems and how they are used:
- FAT
  - FAT32
  - NTFS
  - CDFS
43. What is the main difference between basic disks and dynamic disks?
44. Describe the following:
- Simplex
  - Half-Duplex
  - Full-duplex
45. What is HTML used for?
46. Describe the six phases of laser printing?
- 1.
  - 2.
  - 3.
  - 4.
  - 5.
  - 6.
47. What voltage is applied during the writing phase?
48. Which laser printing phase creates the image on the drum?
49. Which laser printing phase applies toner to the image on the drum?
50. Which laser printing phase transfers the toner to the paper?
51. What is the maximum length of a parallel (IEEE 1284) cable?
52. What is the maximum cable length of:
- Serial
  - Parallel
  - USB
  - Firewire
  - SCSI

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53. What hardware devices does POST check?
54. What device does POST check first?
55. What is the SCSI ID #0 used for?
56. What is the SCSI ID #7 used for?
57. Describe the following utilities:  
SCANDISK  
DEFRAG  
FDISK  
SCANREG  
MSCONFIG  
REGEDIT  
SYSEDIT
58. Describe Safe Mode.
59. Describe the following backup methods.  
Full  
Incremental  
Daily
60. What are the following commands used for?  
ipconfig  
winipcfg  
ifconfig
61. What settings can be modified about the desktop?
62. Describe the parts of memory and what controls them.
63. Describe virtual memory, its size, and what files it uses.
64. What is a general protection fault?
65. Describe the different memory modes.
66. What is ASD.EXE used for?
67. What is the name of the file used to track each step of the installation process?
68. Describe these file/folder permissions:  
Read  
Write  
List of folder contents  
Modify  
Full Control
69. What files is used to control a dual-boot?

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70. Describe these types of volumes:

- Simple
- Spanned
- Mirrored
- RAID 0
- RAID 1
- RAID 1/0
- RAID 5

71. Describe the following:

- ERD
- HAL
- ASR

72. What are the parts (Hives) of the registry?

73. What command will upgrade Windows NT to Windows 2000?

74. Describe these Windows elements:

- Control Panel
- Taskbar
- Device Manager
- My Computer
- My Network Places
- My Documents
- Start
- Explorer
- Menu bar
- Scroll bar
- Title bar
- Status bar
- Dr Watson
- Task Manager
- Recovery Console
- MMC

75. What is the default resolution in Windows after the initial installation of a video card?

76. Describe Slot 1 and Slot A.

77. Describe the naming convention for:

- DOS
- Windows 98

78. What is System Restore?

79. Describe the following power issues:

- Sag
- Brownout
- Noise
- Spike
- Surge