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CPE 185

Homework 2

66.   Define byte, word, and doubleword.

        Byte is an 8-bit binary number

         word is a 16-bit binary number

        doubleword is a 32-bit binary number

67. Convert the following words into ASCII-coded character strings:

(a) FROG   46 52 4F 47

(b) Arc   41 72 63

(c) Water   57 61 74 65 72

(d) Well   57 65 6C 6C

68. What is the ASCII code for the Enter key and what is its purpose?

        Enter is a ODH and it is used to return the cursor/print head to the left margin of the screen or page of paper

69.   What is the Unicode?

        Unicode is the 16-bit alphanumeric code used with Windows

70.   Use an assembler directive to store the ASCII-character string 'What time is it'?' in the memory.

        LINE I DB 'What time is it?'

71. Convert the following decimal numbers into S-bit signed binary numbers:

(a) +32   0010 0000

(b) -12   1111 0100

(c) +100   0110 0100

(d) -92   1010 0100

72. Convert the following decimal numbers into signed binary words:

(a)   +1000   0000 0011 1110 1000

(b)   -120   1111 1111 1000 1000

(c)   +SOO   00000011 0010 0000

(d)   -3212   1111 0011 0111 0100

I. What do the following MOY instructions accomplish?

(a) MOY AX,BX   the contents of BX is copied into AX

(b) MOY BX,AX   The contents of AX are copied into BX

(c) MOY BL,CH   the contents of CH are copied into BL

(d) MOY ESP,EBP   the contents of EBP are copied into ESP

(e) MOY RAX,RCX   the contents of RCX are copied into RAX

2. List the 8-bit registers that are used for register addressing.

    AL, AH, BL, BR CL, CR DL, and DH

3. List the 16-bit registers that are used for register addressing.

    AX, BX, CX, DX, SP, BP, SI, DI, CS, DS, ES, SS, FS, and GS

4. List the 32-bit registers that are used for register addressing in the 80386 through the Core2
microprocessors.

    EAX, EBX, ECX, EDX, ESP, EBP, EDt and ESI

5. List the 64-bit registers available to the 64-bit mode of the Pentium 4 and Core2.

    RAX, RBX, RCX, RDX, RSP, RBP, RSI, RDI and R8—R15

6. List the 16-bit segment registers used with register addressing by MOY, PUSH, and POP.

    CS, DS, ES, SS, FS, and GS

7. What is wrong with the MOY BL,CX instruction?

    The register sizes must be equal, 16-bit cannot be fit into 8-bits

8. What is wrong with the MOY DS,SS instruction?

    You may not specify mixed register sizes.