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CSF - Digital Logic and Computer Organization

MB Ch 1 p16: 2,3,4,5,14,18,19,20,22,25,28,34

2. 2, 6, 7, 11, 12, 14

3. 10, 2, 2, 5, 16

4. 0010 + 0010 = 0100

5. 2^10 = 1024; 4K = 4096; 8192 = 8K

14. 72(10) = 0100 1000(2)

18. 27FF = 0010 0111 1111 1111; 2800 = 0010 1000 0000 0000; 8AFC = 1000 1010 1111 1100

a) 8AFD = 1000 1010 1111 1101
b) 8AFE = 1000 1010 1111 1110
c) 8AFF = 1000 1010 1111 1111
d) 8B00 = 1000 1011 0000 0000
e) 8B01 = 1000 1011 0000 0001
f) 8B02 = 1000 1011 0000 0010

19. a) 1110 1000 = E8; b) ABC = 1010 1011 1100; c) CD42 = 1100 1101 0100 0010; d) F329 = 1111 0011 0010 1001

20. a) 1110 1000 = E8; b) 1100 1011 = CB; c) 1010 1111 0110 = AFG; d) 1000 1011 1101 0110 = 8BD6

22. FF = 255; A4 = 164; 9B = 155; 3C = 60

25. From 0000 to 3FFF
(3 x 16^3)+(15 x 16^2)+(15 x 16^1)+(15 x 16^0)= 16,383 = 16K

28. a) FFF; b) 3FFF; c) 7FFF; d) FFFF

34. (Binary/Decimal/Hexadecimal)
0100 0001, 65, 41
1100 1000, 200, C8
0011 1100 1101, 973, 3CD
0111 1101, 125, 7D
1101 1110 1111, 3567, DEF
1111 1111 1111 1111, 65535, FFFF
0111 1101 0000, 2000, 7D0