1-3) a. 011 001

3 1

$\boxed{31_8}$

b. 011 101

3 5

$\boxed{35_8}$

c. 001 011 100

1 3 4

$\boxed{134_8}$

d. 001 011 001

1 3 1

$\boxed{131_8}$

e. 001 101 101

1 5 5

$\boxed{155_8}$

(4 min)

1-4) a. 46_8 $\boxed{100110_2}$

b. 74_8 $\boxed{111100_2}$

c. 61_8 $\boxed{110001_2}$

d. 32_8 $\boxed{011010_2}$

e. 57_8 $\boxed{101111_2}$

(3 min)

1-7)

0000	0	1000	8
0001	1	1001	9
0010	2	1010	A
0011	3	1011	B
0100	4	1100	C
0101	5	1101	D
0110	6	1110	E
0111	7	1111	F

a. 10111001 = $\boxed{B9_{16}}$

b. 1101 1100 = $\boxed{DC_{16}}$

c. 0111 0100 = $\boxed{74_{16}}$

d. 1111 1011 = $\boxed{FB_{16}}$

e. 1100 0110 = $\boxed{C6_{16}}$

(5 min)

TOPS 35500

1-8 USED SAME TABLE AS 1-7. ONLY IN REVERSE

a) $C5_{16}$ = $\boxed{1100\ 0101_2}$

b) FA_{16} = $\boxed{1111\ 1010_2}$

c) $D6_{16}$ = $\boxed{1101\ 0110_2}$

d) $A94_{16}$ = ~~1010 1001~~ $\boxed{1010\ 1001\ 0100_2}$

e) 62_{16} = $\boxed{0110\ 0010_2}$ (3min)

1-9

16^2	16^1	16^0
256	16	1

a. ϕ 8 6

$0 + 128 + 6 = \boxed{134_{10}}$

b) F4 = F=15

16 1

×15 ×4

$240 + 4 = \boxed{244_{10}}$

c) 16 1

9 2

~~151~~ + 2 = ~~$\boxed{153_{10}}$~~

144 $\boxed{146_{10}}$

d) A=10

B=11

16 1

×10 ×11

$160 + 11 = \boxed{171_{10}}$

e) 3C5

C = 12

256 16 1

×3 ×12 ×5

$768 + 192 + 5 = \boxed{965_{10}}$

11

768

+192

5

(6min)

1-11 USE TABLE FROM PROBLEM 1-7 SOLUTION

a) $\underset{9}{1001}\ \underset{8}{1000}_{BCD} = \boxed{98_{10}}$

b) $\underset{6}{0110}\ \underset{9}{1001}_{BCD} = \boxed{69_{10}}$

c) $\underset{7}{0111}\ \underset{4}{0100}_{BCD} = \boxed{74_{10}}$

d) $\underset{3}{0011}\ \underset{6}{0110}_{BCD} = \boxed{36_{10}}$

e) $\underset{8}{1000}\ \underset{1}{0001}_{BCD} = \boxed{81_{10}}$ (2 min)

1-12 USE TABLE FROM PROBLEM 1-7 SOLUTION

a) $87_{10} = \boxed{1000\ 0111_{BCD}}$

b) $142_{10} = \boxed{0001\ 0100\ 0010_{BCD}}$ * MUST HAVE PRECEEDING ZEROS.

c) $94_{10} = \boxed{1001\ 0100_{BCD}}$

d) $61_{10} = \boxed{0110\ 0001_{BCD}}$

e) $44_{10} = \boxed{0100\ 0100_{BCD}}$ (2 min)

1-13

a) % $010\ 0101_{2}$

b) \$14 0100100 0110001 0110100

c) N-6 1001110 0101101 0110110

d) CPU 1000011 1010000 1010101

e) Pg 1010000 1100111 (6 min)