21070006208 – Muhamed Cicak  
  
1. Question Answer:  
To convert 2,106,208 to hexadecimal, we first divide by 16:

2,106,208 ÷ 16 = 131,638; remainder = 0

Then, we divide the quotient by 16:

131,638 ÷ 16 = 8227; remainder = 6

We repeat the division:

8227 ÷ 16 = 514 with a remainder of 3

514 ÷ 16 = 32 with a remainder of 2

32 ÷ 16 = 2 with a remainder of 0

2 ÷ 16 = 0 with a remainder of 2

Writing the remainders from bottom to top, we get the result: 202360

2.i) Question Answer:  
To convert 171 to binary, we first divide by 2:

171 ÷ 2 = 85; remainder = 1

Again, we keep dividing by 2:

85 ÷ 2 = 42; remainder = 1

42 ÷ 2 = 21; remainder = 0

21 ÷ 2 = 10; remainder = 1

10 ÷ 2 = 5; remainder = 0

5 ÷ 2 = 2; remainder = 1

2 ÷ 2 = 1; remainder = 0

1 ÷ 2 = 0; remainder = 1

Writing the remainders from bottom to top, we get the result: 10101011

2.ii) Question Answer:  
To convert 171 to base 5, we keep dividing by 5:

171 ÷ 5 = 34; remainder = 1

34 ÷ 5 = 6; remainder = 4

6 ÷ 5 = 1; remainder = 1

1 ÷ 5 = 0; remainder = 1

Writing the remainders from bottom to top, we get the result: 1141

3. Question Answer:

I picked 8927 and 6543 to find BCD subtraction

First I take 10′s complement for 6543

So, 9's complement of 6543 is obtained by subtracting each digit from 9

9 9 9 9

- 6 5 4 3

3 4 5 6

Now we add 1 to the 9's complement to obtain the 10's complement:

3456 + 1 = 3457

Next, we add 8927 and 3457 using BCD addition

BCD code for 8927: 1000 1001 0010 0111

BCD code for 3457: 0011 0100 0101 0111

Addition: 1011 1101 0111 1110

If Invalid BCD then add 6: 0110 0110 0110

Addition : 10001 10011 0111 10100

Remaining bits except carry : 10001 0011 0111 0100

Carry : 1 1

Addition : 10010 0011 1000 0100

BCD value : 12 3 8 4

The left most bit of the result is 1, called carry and it is ignored.

So final answer of BCD Subtraction is 2384