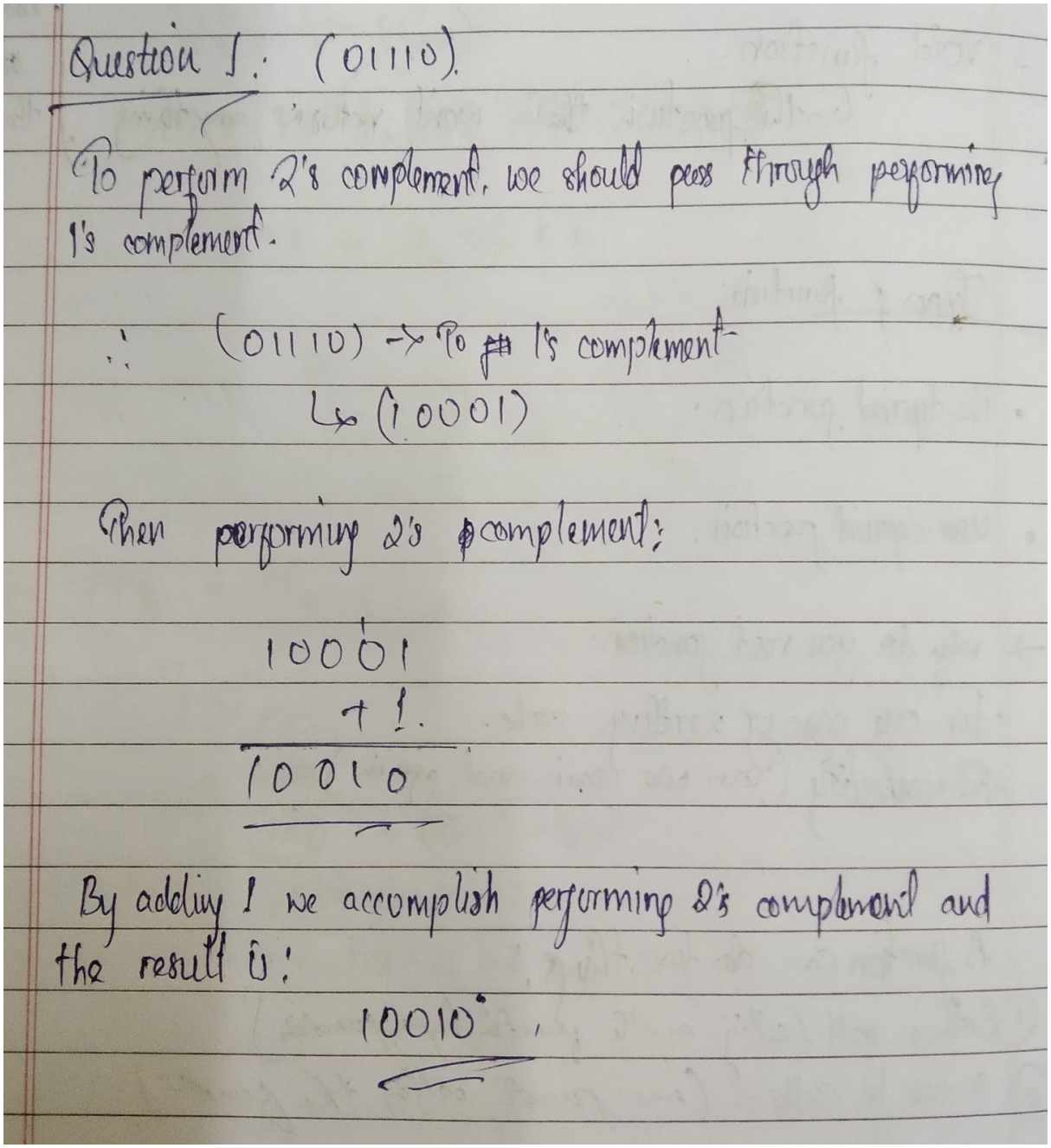
Assignment 1 (ITP203-Theory)

Question 1

Perform the 2's complement on Binary Number (01110) and note down the result.



Question 1. (01110).

To perform 2's complement, we should pass through performing 1's complement.

∴ (01110) -> To 1's complement

↳ (10001)

Then performing 2's complement:

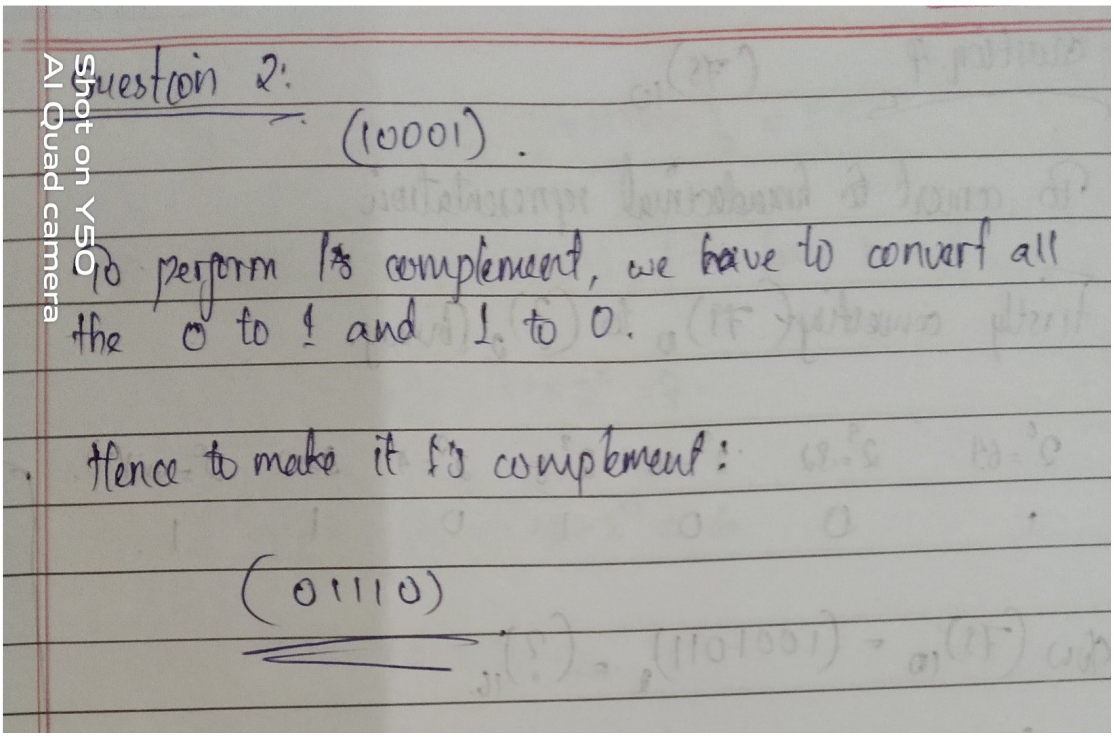
10001
+ 1.
10010

By adding 1 we accomplish performing 2's complement and the result is:

10010.

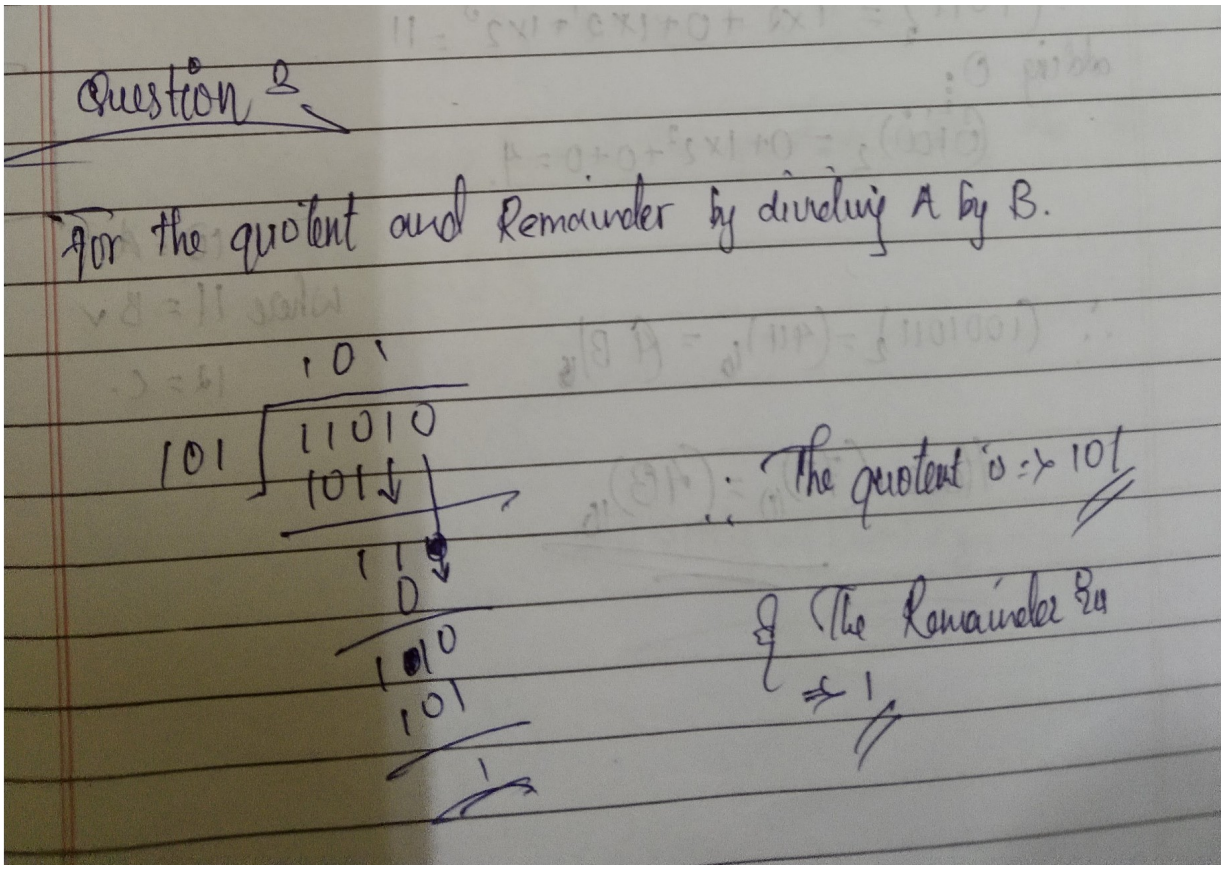
Question 2

Perform the 1’s complement on (10001).



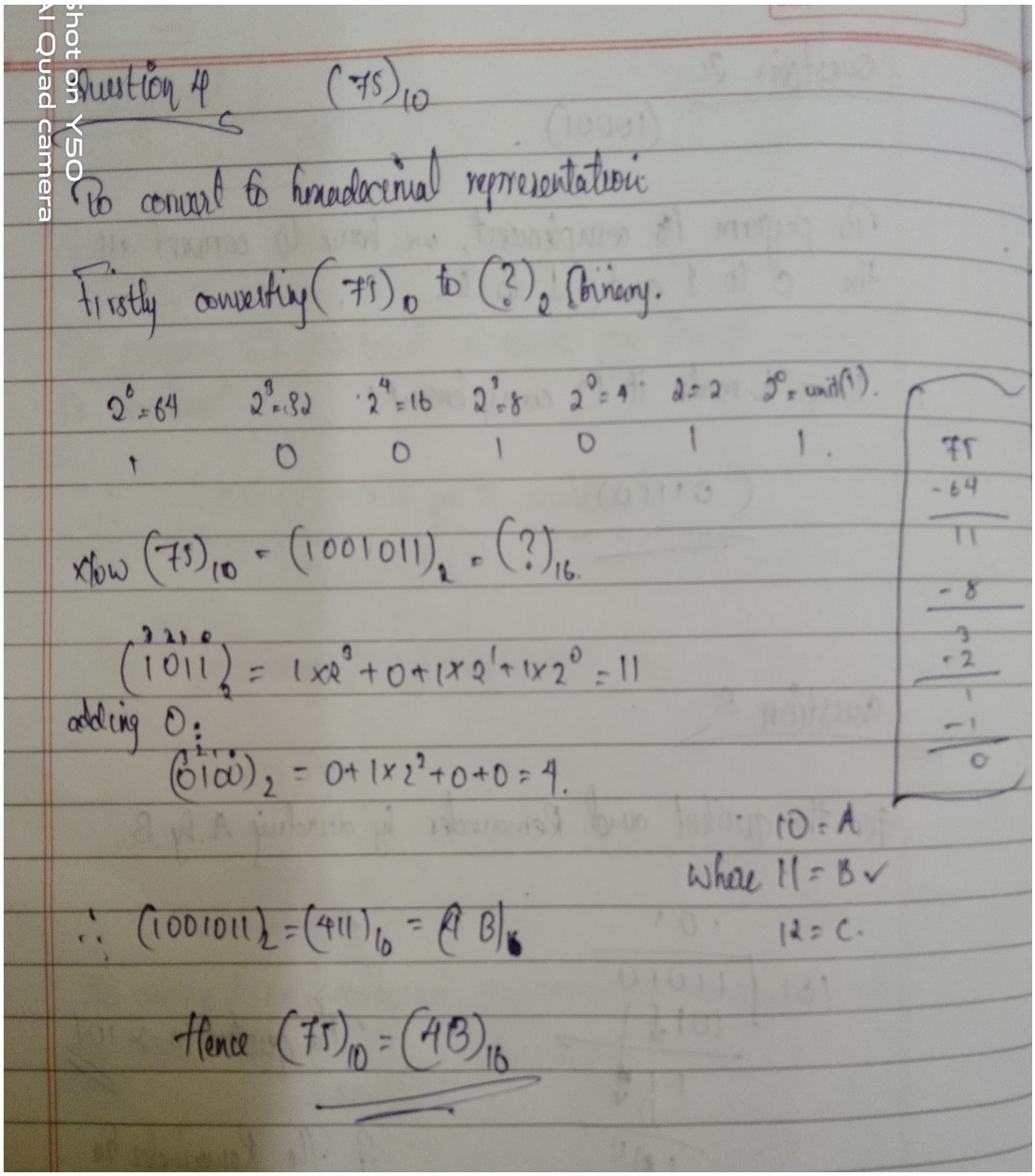
Question 3

You have A = 11010 and B = 101. Divide A by B and find the Quotient and Reminder.



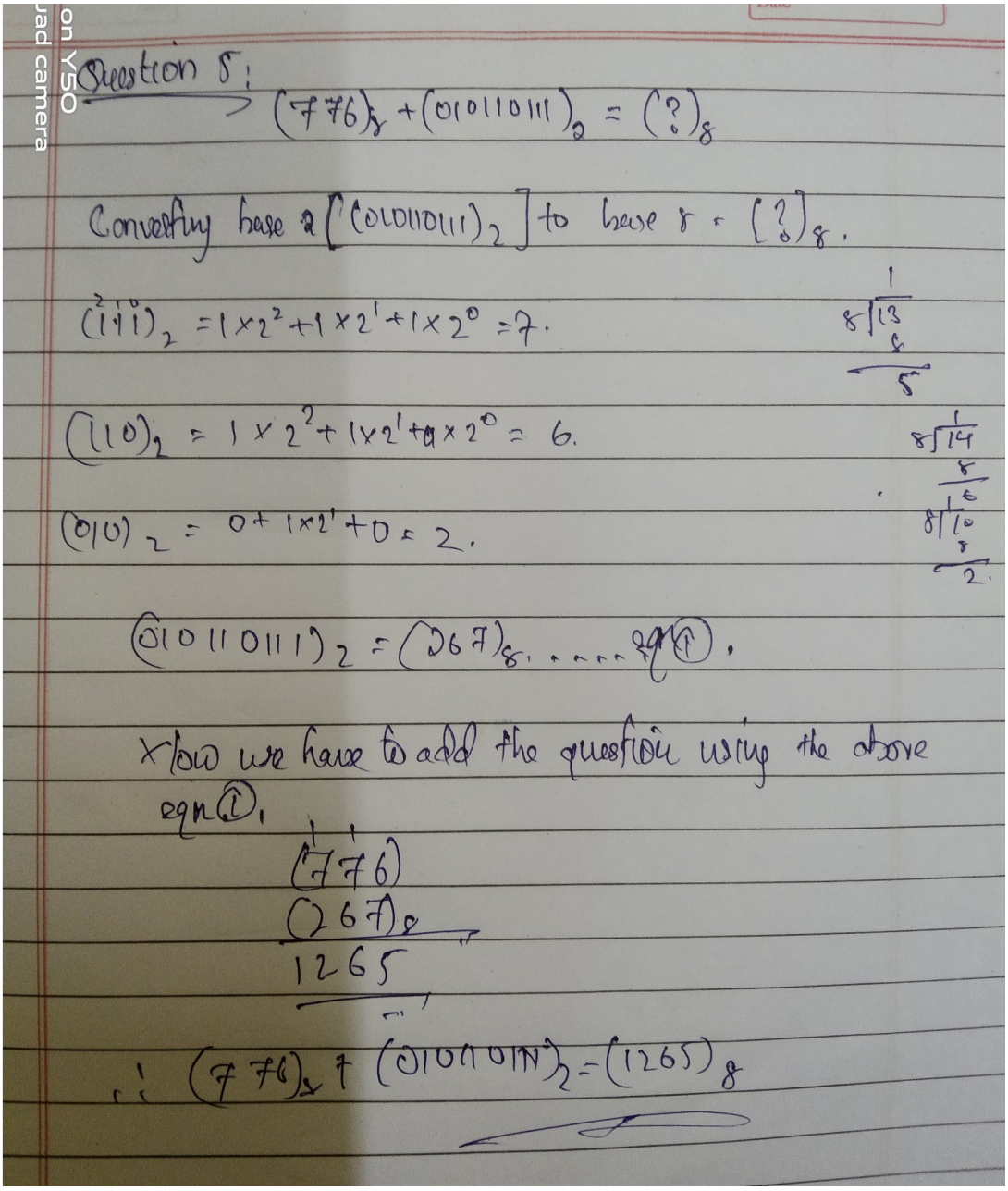
Question 4

Convert (75) 10 into Hexadecimal representation?



Question 5

(776) 8 + (010110111) 2 = (?) 8.



Question 6

WAP in C using While-Loop/Do-While Loop to find a Fibonacci series of “N” number of terms.

```
#include <stdio.h>

int main(){
	int N, i, a, b, c;
	printf("Number for Fibonacci series: ");
	scanf("%d", &N);

	i=1;
	a=0;
	b=1;

	while(i<=N){
		printf("%d\n", a);
		c = a + b;
		a = b;
		b = c;
		i++;
	}
	return 0;
}
```

Question 7

WAP in C using While-Loop/Do-While Loop to find if a number (any digit) is Armstrong Number.

```
#include <stdio.h>
int main()
{
  int num, original, rem, sum = 0;

  printf("Enter a three-digit Number: ");
  scanf("%d", &num);

  original = num;

  while(original != 0){
    rem = original%10;
    sum =sum + rem*rem*rem;
    original=original/ 10;
  }

  if(sum == num)
    printf("%d is an Armstrong number.",num);

  else
    printf("%d is not an Armstrong number.",num);
```

```
    printf("\n");

  return 0;
}
```