



The Institution of Engineers,  
NITK Chapter

# SMP Cryptography 2020

## Assignment 1

### 1) Convert hex to base64

The string:

```
49276d206b696c6c696e6720796f757220627261696e206c696b65206120706f69736f6e6f7573  
206d757368726f66d
```

Should produce:

```
SSdtlGtpbGxpbmcgeW91ciBicmFpbiBsaWtlGEgcG9pc29ub3VzIG11c2hyb29t
```

So go ahead and make that happen. You'll need to use this code for the rest of the exercises.

### 2) Fixed XOR

Write a function that takes two equal-length buffers and produces their XOR combination.

If your function works properly, then when you feed it the string:

```
1c0111001f010100061a024b53535009181c
```

... after hex decoding, and when XOR'd against:

```
686974207468652062756c6c277320657965
```

... should produce:

```
746865206b696420646f6e277420706c6179
```

Submission Date : Monday (4-5-2020)

