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Roll No- (1121023) - 21
Subject- Information Security And Cyberlaws
Date: 15- June- 2021

MCQs

1. Asymmetric key encryption with sender's public key
2. Spyware
3. An authentication of an electronic record
4. Cyber laws
5. Only an alphanumeric
6. Idea is same title is different
7. Checksum
8. The identity of the character is changed while its position remains unchanged.
9. Both b and c
10. None

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Ans - 3 # Implementation Of Encryption And Decryption Of the Vignere Cipher

```
def generateKey(string, key):
    key = list(key)
    if len(string) == len(key):
        return(key)
    else:
        for i in range(len(string) - len(key)):
            key.append(key[i % len(key)])
    return("".join(key))

def cipherText(string, key):
    cipher_text = []
    for i in range(len(string)):
        x = (ord(string[i]) + ord(key[i])) % 26
        x += ord('A')
        cipher_text.append(chr(x))
    return("".join(cipher_text))
```

```
def originalText(cipher_text, key1):
    orig_text = []
    for i in range(len(cipher_text)):
        x = (ord(cipher_text[i]) -
             ord(key[i]) + 26) % 26)
        x += ord('A')
        orig_text.append(chr(x))
    return (" ".join(orig_text))

if __name__ == "__main__":
    string = ""
    keyword = "
    key = generatedKey(string, keyword)
    cipher_text = cipherText(string, key)
    print("Ciphertext : ", cipher_text)
    print("Original/Decrypted Text : ",
          originalText(cipher_text, key))
```

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Ans- 4. # Implement Of OTP

```
import random as rn
def otpgenerate():
    otp=""  # Empty String
    for i in range(4):
        otp+=str(rn.randint(1,9))
    print("Your OTP is :")
    print(otp)

otpgenerate()
```

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Ans- 5 # Implementation of Encryption And Decryption Using Caeser Ciphes

```
=> def encryption(plain_text, key):
       encrypted = " "
       for c in plain_text:
           if c.isupper():
               c_index = ord(c) - ord('A')
               c_shifted = (c_index + key) %26 + ord('A')
               ~~c_new = chr(c)~~
               c_new = chr(c_shifted)
               encrypted = c_new

           elif c.islower():
               c_index = ord(c) - ord('a')
               c_shifted = (c_index + key) %26
                           + ord('a')
               c_new = chr(c_shifted)
               encrypted += c_new
```

```
elif c.isdigit():
        c_new = (int(c) + key) %10
        encrypted += str(c_new)

else:
        encrypted += c

return encrypted

def decryption(ciphertext, key):
        decrypted = ""
        for c in ciphertext:
                if c.isupper():
                        c_index = ord(c) - ord('A')
                        c_og_pos = (c_index - key) %26 + ord('A')
                        c_og = chr(c_og_pos)
                        decrypted += c_og

                elif c.islower():
                        c_index = ord(c) - ord('a')
                        c_og_pos = (c_index - key) %26 +
                                        ord('a')
                        c_og = chr(c_og_pos)
                        decrypted += c_og
```

```
        elif c.isdigit():
            c_og = (int(c) - key) % 10
            decrypted += str(c_og)
        else:
            decrypted += c
    return decrypted

plain_text = "Attack from North"
ciphertext = encryption(plain_text, 4)
print("Plain text message:\n", plain_text)
print("Encrypted Ciphertext:\n", ciphertext)
decryptedmsg = decryption(ciphertext, 4)
print("The decrypted message is:\n", decryptedmsg)
```