

Q1) RSA Algorithm

B) $P = 3$ $Q = 11$ $e = 7$

Plain text = 5 Cipher text = ?

$$N = P * Q = 3 * 11 = 33$$

$$Z = \phi(n) = (P-1) * (Q-1) = 20$$

Now the private key $d = 1$

Cipher text $C = E(M)$

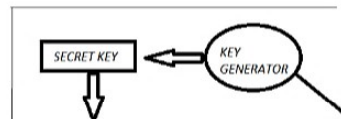
$$= M^e \text{ mod } N$$

$$= (5^7) \text{ mod } 33$$

$$C = 14$$

Q2) Draw a diagram to show the steps processed

BOB



Now the private key $d = 1$

Cipher text $C = E(M)$
 $= M^e \bmod N$
 $= (5^7) \bmod 33$
 $C = 14$

Q2) Draw a diagram to show the steps processed

