In class assignment

1. Two bytes are known to have been encrypted by the same 8-bit RC4 stream producing C1 = 1111 0011 and C2 = 1111 1001 respectively. The bytes are believed to be non-capitalised vowels ‘a’:61(Hex) ‘e’:65, ‘i’:69, ‘o’:6F ‘u’:75. What are they? What is the 8 bit key?

2. Three ASCII characters are believed to have been encrypted by the same 8-bit RC4 stream producing the cipher-text bytes:

   C1 = 1 0 0 0 0 0 1 1

   C2 = 1 0 0 1 1 0 1 1

   C3 = 1 0 0 0 1 0 1 0

   If they are all assumed to be decimal digits 0 to 9 or a space as listed in table 1, what are the three digits and what is the 8-bit RC4 stream?