MATH36206 Quiz5 Knapsack Cryptosystems

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**INSTRUCTIONS:** Show all details in your solutions. Marks are given for the level of understanding shown. Good luck!

1. Encrypt “110111 101001” using a 6-bit knapsack cipher with public key A = {118, 99, 61, 200, 29, 39}. **(2 marks)**
2. Decrypt using a 6-bit knapsack cipher with private key (u = 215, v = 137) and public key

A = {118, 99, 61, 200, 29, 39}. Show the computation of , S, and t. **(8 marks)**

