

Name: \_\_\_\_\_  
Student ID: \_\_\_\_\_

## Quiz 2

This quiz is graded out of 10 marks. No books, calculators, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

**Question 1.**(5 marks) Consider the matrix:

$$B = \begin{bmatrix} 2 & 3 \\ 4 & 0 \end{bmatrix}$$

Find the matrix  $A$  if

$$(B^t - I + A^t)^{-1} = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$$

**Question 2.**(5 marks) Solve the following system by Gaussian elimination or Gauss-Jordan elimination.

$$3x_1 - x_2 + 2x_3 = -2$$

$$4x_1 + x_2 - 3x_3 = 5$$

$$10x_1 - x_2 + x_3 = 1$$