Name: _____

Quiz 2

This quiz is graded out of 12 marks. No books, watches, 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. *(6 marks)* Given that $(0,\ 0,\ 0,\ 0)$ is a particular solution of a system of linear equations with coefficient matrix A where

$$A = \begin{bmatrix} 2 & 1 & 0 & -1 \\ 3 & 3 & 2 & -1 \\ 5 & 4 & 2 & -2 \end{bmatrix},$$

find the augmented matrix of the system of linear equations and then find the solution set using Gauss Jordan elimination.

Question 2.[1] *(6 marks)* Consider the system

$$\begin{aligned} kx &+ y &+ kz &= 1 \\ x &+ y &+ z &= 1 \\ (2-k)x &+ (2-k)y &+ z &= 1 \\ kx &+ y &+ kz &= k^2 \end{aligned}$$

Find the value(s) of k, if any, such that the system has: no solutions, a unique solution, infiniely many solutions.

[1] From the Winter 2018 Dawson College Final Examination.