MON 4 *March* 2019

Quiz 2 *Section*: 52452

Name* : *SOLUTION ***Student ID* :**

Question 1 **(2 marks : 1 for each value)**

Find the values of a

$|A| = \begin{vmatrix} a-1 & 4 \\ 1 & a+2 \end{vmatrix} = 0$

$|A| = (a-1)(a+2) - 4 = 0$

$= a^2 + a - 2 - 4 = 0$

$= a^2 + a - 6 = 0$

$= (a+3)(a-2) = 0$

$a = -3$ $1mark$, $a = 2$ $1mark$

Question 2 **(3 *marks*)**

Choose the correct values

1) *you're given* :

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

What is the value of $\det(A^{-2})$.

$a)16$ $b)\frac{1}{16}$ $c)256$ $d)\frac{1}{256}$ $1mark$

2) *Choose the correct value of* $det(B)$ *in each of the following cases* :

You're given :

- $\det(A) = 4$
- *B is a matrix that resulted from A by mutiplying its* 1*st row by* 3 *and adding it to the* 2*nd row.*

What is $\det(B)$?

$a)$ 12 $b)\frac{4}{3}$ $c)$ 4 1mark $d)$ 7

3) *If* :

- *B and A are of the same size.*
- $\det(AB) = 5$
- $\det(A^T) = 1$

What is $\det(B)$?

$a)$ 1 $b)$ 6 $c)$ 5 $1mark$ $d)$ *can't be determined by the given information*