KFUPM – Department of Mathematics and Statistics – Term 101 **MATH 202**

QUIZ # 5 Code 1 (Duration = 20 minutes)

NAME:ID:		Section:
Exercise 1 (8 points)		
Use the variation of parameters method to solve the system	$X' = \begin{pmatrix} 1 & 1 \\ 1 & 1 \end{pmatrix} X + \begin{pmatrix} t \\ 1 \end{pmatrix}$	

Exercise 2 (7 points)

Use exponential matrix to solve the system
$$X' = \begin{bmatrix} 0 & 1 & 0 \\ 0 & 0 & 0 \\ 1 & 0 & 0 \end{bmatrix} X$$

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QUIZ # 5 Code 2 (Duration = 20 minutes)

NAME:ID:	: Section:
Exercise 1 (8 points)	
Use the variation of parameters method to solve the system	$\mathbf{m} X' = \begin{pmatrix} 2 & 2 \\ 2 & 2 \end{pmatrix} X + \begin{pmatrix} 1 \\ t \end{pmatrix}$

Exercise 2 (7 points)

Use exponential matrix to solve the system
$$X' = \begin{bmatrix} 0 & 2 & 0 \\ 0 & 0 & 0 \\ 2 & 0 & 0 \end{bmatrix} X$$

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QUIZ # 5 Code 3 (Duration = 20 minutes)

NAME:	ID: Section:
Exercise 1 (8 points)	
Use the variation of parameters method to solve the sys	stem $X' = \begin{pmatrix} 3 & 3 \\ 3 & 3 \end{pmatrix} X + \begin{pmatrix} 2 \\ t \end{pmatrix}$

Exercise 2 (7 points)

Use exponential matrix to solve the system
$$X' = \begin{bmatrix} 0 & -1 & 0 \\ 0 & 0 & 0 \\ -1 & 0 & 0 \end{bmatrix} X$$