KFUPM – Department of Mathematics & Statistics

MATH202 - Term 181 Quiz 6 (Duration: 25 Minutes)

Name:	_ ID #:	Section: 03

Q1 (2.5 Pts) Solve the system

$$\frac{dx}{dt} = 2x$$
$$\frac{dy}{dt} = -x + 2y$$

Q2 (3.5 Pts) Solve the system
$$X' = \begin{pmatrix} 1 & 0 \\ 2 & -1 \end{pmatrix} X + \begin{pmatrix} e^t \ln t \\ -e^t \ln t + te^t \sin(t^2) \end{pmatrix}$$

Q3 (4 Pts) Solve the system $X' = \begin{pmatrix} 1 & 0 & 0 \\ 2 & 1 & 1 \\ 0 & -1 & 1 \end{pmatrix} X$