King Fahd University of Petroleum and Minerals Math 202 Quiz, Semester: 143 Duration: 55 minutes

Full Name: ID:

Section and Serial number:

Question 1 Solve the following systems of linear DEs:

1)
$$X' = AX$$
 where $A = \begin{bmatrix} 2 & 2 & 1 \\ 1 & 3 & 1 \\ 1 & 2 & 2 \end{bmatrix}$.

2)
$$X' = BX$$
 where $B = \begin{pmatrix} 3 & -9 \\ 4 & -3 \end{pmatrix}$

3)
$$X' = DX$$
 where $D = \begin{bmatrix} 0 & 1 & 2 \\ -5 & -3 & -7 \\ 1 & 0 & 0 \end{bmatrix}$.