

MATH 202.2 (092)

Quiz 5 (Chap. 8.1-3)

Duration: 15mn

Name:

ID number:

Given that $\Phi(t) = \begin{pmatrix} 0 & e^t \\ e^{2t} & 2e^t \end{pmatrix}$ is a fundamental matrix of the homogeneous system associated with the nonhomogeneous system $X' = \begin{pmatrix} 1 & 0 \\ -2 & 2 \end{pmatrix} X + \begin{pmatrix} 1 \\ 0 \end{pmatrix} e^{-2t}$, use variation of parameters method to find a particular solution X_p , then write the general solution of the nonhomogeneous system.