ELECTRICAL ENGINEERING DEPARTMENT
CALIFORNIA POLYTECHNIC STATE UNIVERSITY

EE 112 Electric Circuit Analysis I

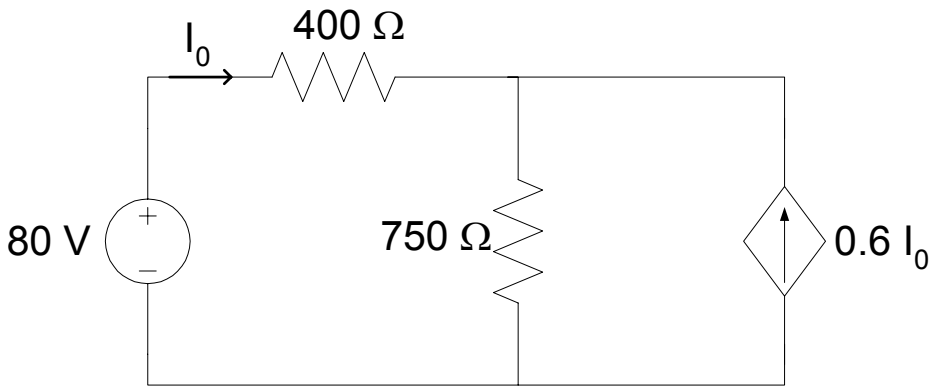
EXAM 2 **Winter 2004**

Name:_____ **Last 4 digits of Student ID:_____**

Section #:_____

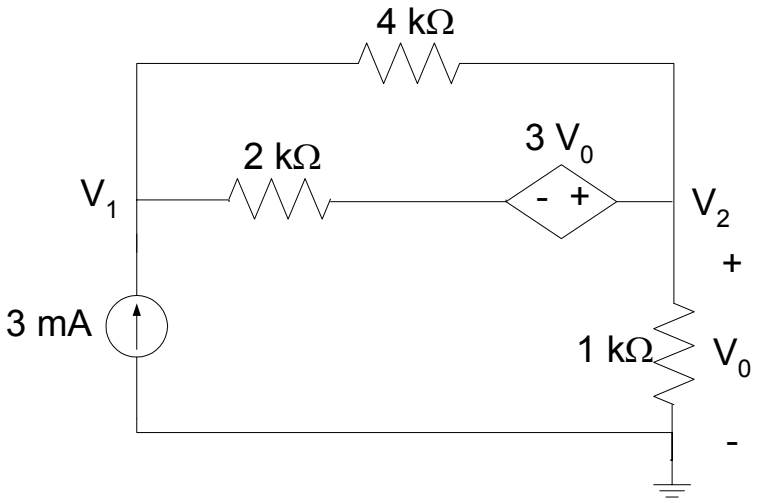
1 (6)	2 (6)	3 (6)	4 (7)	Total (25)

PROBLEM #1
Use **Mesh Analysis** to determine the current I_0 in the network shown below.



PROBLEM #2

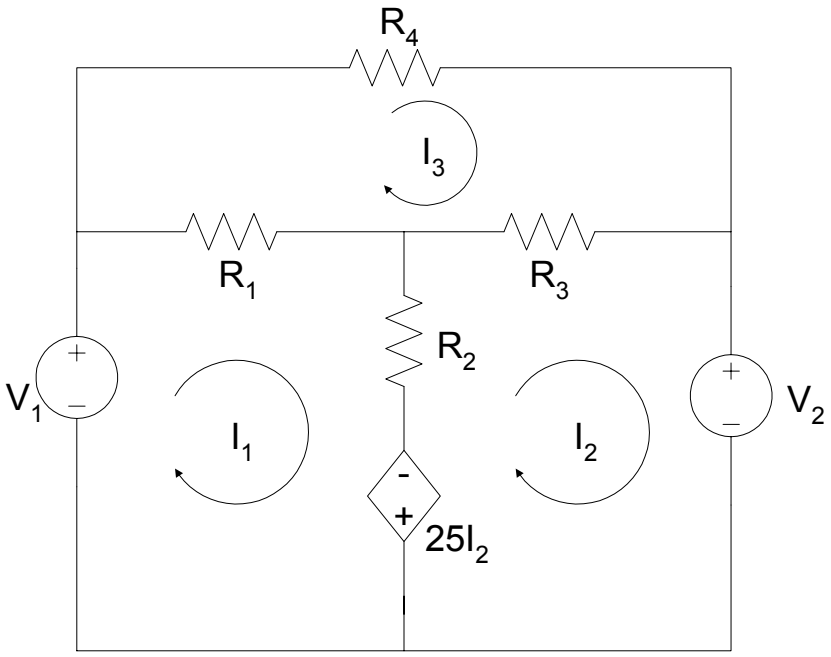
For the circuit below, find V_1 and V_2 using **nodal analysis.**



PROBLEM #3
The mesh equations for the circuit below are

$$\begin{bmatrix} 20 & -40 & -5 \\ -15 & 65 & -25 \\ -5 & -25 & 35 \end{bmatrix} \begin{bmatrix} I_1 \\ I_2 \\ I_3 \end{bmatrix} = \begin{bmatrix} V_1 \\ -V_2 \\ 0 \end{bmatrix}$$

Find R_1, R_2, R_3, and R_4.



PROBLEM #4
Using **nodal analysis**, find i.