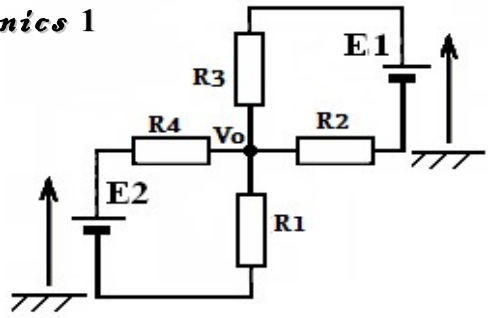


Exam (1h:30min)

Fundamental Electronics 1

الاسم:	
اللقب:	
الفوج:	الشعبة:



5 pts. **Exercise 1:** Lets consider the opposite circuit :

Select one method to determine the output voltage ?
 Choose from : (Superposition, Thevenin, or Milman)

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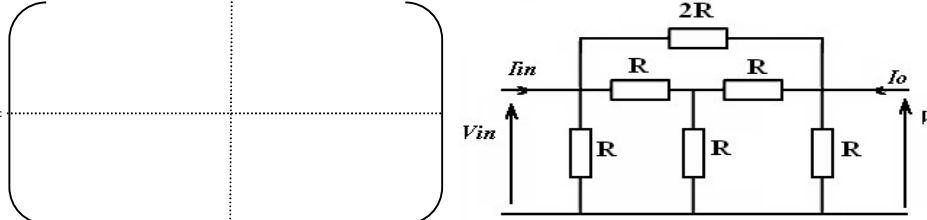
5 pts. **Exercise 2:**

Lets consider the opposite quadropole circuit :

1/ **Determine** the admittance matrix [Y] using **parallel** association?

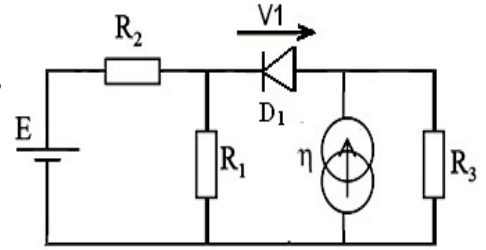
$$[Y] = [Y1] + [Y2] = \left(\begin{array}{c|c} & \\ \hline & \end{array} \right) + \left(\begin{array}{c|c} & \\ \hline & \end{array} \right) = \left(\begin{array}{c|c} & \\ \hline & \end{array} \right)$$

2/ **Determine** its hybrid matrix ? [H]=



5 pts. **Exercise 3:** Lets consider the opposite circuit with **ideal** diode:

- 1/ Remove the diode, then **determine** the dropping voltage **V1**?
- 2/ **Determine** the **current** flowing R_3 , for $R_1=R_2= R_3=500\Omega$, $E=10v$, $\eta=20mA$?
- 3/ **Determine** the **current** flowing R_3 , if we reverse the diode?



A large area of the page is filled with horizontal dotted lines, providing space for the student to write their answers to the three questions posed in the exercise.

Handwriting practice sheet with two columns of dotted lines for writing.