Solve for each space in the following tables. Show all working clearly laid out.

| VT | V1 | V2 | V3 | V4 |
| :--- | :--- | :--- | :--- | :--- |
| IT 0.942 A | I | I2 | I3 | I4 |
| RT | R1 680 $\Omega$ | R2 $820 \Omega$ | R3 470 $\Omega$ | R4 330 $\Omega$ |
| PT | P1 | P2 | P3 | P4 |

2

| VT | V1 | V2 | V3 | V4 |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { IT } \\ & 0.00639 \\ & \mathrm{~A} \end{aligned}$ | 11 | $\begin{aligned} & 120.00139 \\ & A \end{aligned}$ | $\begin{aligned} & 130.00154 \\ & \text { A } \end{aligned}$ | $\begin{aligned} & 140.00115 \\ & \text { A } \end{aligned}$ |
| RT | R1 $\quad$ 2 | R2 $\quad$ 2 | R3 $\quad$ 2 | R4 $\quad \Omega$ |
| PT | $\begin{aligned} & \hline \text { P1 } \\ & 0.640 \mathrm{~W} \end{aligned}$ | P 2 | P3 | P4 |

3

| VT | V1 | $V_{2}$ | $V_{3}$ | $V_{4}$ |
| :--- | :--- | :--- | :--- | :--- |
| IT | 11 | 12 | 13 | 14 |
| RT | $R 1 \quad 82 \mathrm{k} \Omega$ | $R 2 \quad 75 \mathrm{k} \Omega$ | $R 3 \quad 56 \mathrm{k} \Omega$ | $R 4 \quad 62 \mathrm{k} \Omega$ |
| PT <br> 3.436 W | P1 | P2 | $P_{3}$ | P4 |

4

| VT | V1 | V2 | V3 | V4 |
| :--- | :--- | :--- | :--- | :--- |
| IT | II | I2 | I3 | 14 |
| RT | R1 $82 k \Omega$ | R2 $75 \mathrm{k} \Omega$ | R3 $56 \mathrm{k} \Omega$ | R4 $62 \mathrm{k} \Omega$ |
| PT <br> $3.436 W$ | P1 | P2 | P3 | P4 |

## 5

A parallel circuit contains the following resistor and other values:
$R 1=360 \Omega \quad R 2=470 \Omega \quad R 3=300 \Omega$
$R 4=270 \Omega \quad I T=0.05 A$

| $R_{T}$ | $l_{1}$ | $l_{2}$ |
| :--- | :--- | :--- |
| $l_{3}$ | $l_{4}$ |  |

6
Solve all the components shown and blank in the big quiz question below!


After you do do all the manual calculations on this big circuit, you will use Multisim (circuit maker 200) and construct it with all current meters as required and then run the simulation and check your manual answers.

