

QUIZ #5**25 points, 18 minutes****SCORE** _____

The component values are:

$$E_1 = 10 \text{ V}, E_2 = 20 \text{ V}, E_3 = 30 \text{ V},$$

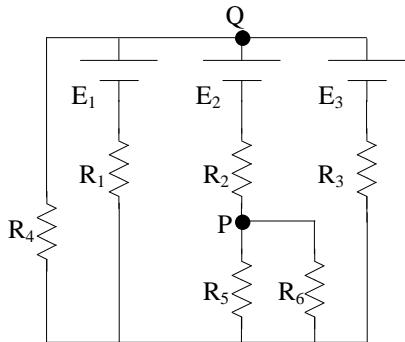
$$R_1 = 100 \Omega, R_2 = 200 \Omega, R_3 = 300 \Omega, R_4 = 400 \Omega, R_5 = R_6 = 1000 \Omega.$$

Battery #1 is being charged and its current is 32.4 mA.

Battery #3 is supplying power to the circuit and its current is 55.9 mA.

Find the following:

- (a) The power dissipated by the resistor R_1 .
- (b) The voltage across the resistor R_4 .
- (c) The current through battery E_2 . Also, is this battery supplying power to the circuit or being charged?
- (d) The current through resistor R_5 .
- (e) $V_P - V_Q$

**QUIZ #6****25 points, 18 minutes****SCORE** _____