

Midterm 1 Rubric :

Problem 1 .

Recognizing parallel resistors - 5 points

Recognizing series resistors - 5 points

final answer - 5 points

Problem 2

Applying KCL - 5 points

Applying KVL - 5 points

Find current i_1 and i_3 - 10 points

V_1, V_2, V_3, V_4, V_5 - 2 points each

Problem 3

Applying KCL at node "a" and "b" - 5 points

KVL in loop 1 and finding the corresponding current - 10 points

KVL in loop 2 and finding the corresponding current - 10 points

V_1, V_2 - 2.5 points each

For the alternate solution

Applying KCL at node "a" and "b" - 5 points

Finding the equivalent resistance - 10 points

Finding the currents - 10 points

V_1, V_2 - 2.5 points each

Problem 4

Finding the cost per month - 10 points

Finding the currents through the appliances - 2.5 points each

Finding the resistance of the appliances - 2.5 points each