

task_w3wf215v2u98ty07_with_calculation

Student Group

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efficiency, charges, power, exam ee1 SS2023

Exercise E17 Efficiency

(written test, approx. 14 % of a 60-minute written test, SS2023)

A. (10 points) A battery with an open-circuit voltage $U_S = 3.5 \text{ V}$ and an internal resistance $R_i = 0.05 \text{ }\Omega$ is connected to a load resistor $R_L = 2 \text{ }\Omega$. The battery shall provide energy for a device with an load resistance of $R_L = 2 \text{ }\Omega$. The following values are from the battery data sheet.

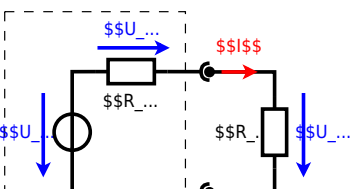
begin{align*} \text{Solution:} \end{align*}

• \Omega \text{ verify: } 0.05 \text{ }\Omega

.. Efficiency

.. Discharge

Result



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