

**1. Aufgabe**

- (a)  $\hat{u}_L = 4 \text{ V}$
- (b)  $u_{qE} = 4 \text{ V}$   
 $R_{iE} = 100 \Omega$   
 $\tau = 20 \text{ ms}$   
 $\hat{i}_L = 40 \text{ mA}$
- (c)  $\phi_{\min} = 0 \mu\text{Wb}$   
 $\phi_{\text{avg}} = 80 \mu\text{Wb}$   
 $\phi_{\max} = 160 \mu\text{Wb}$
- (d)  $\phi_{\min} = 12,3 \mu\text{Wb}$   
 $\phi_{\text{avg}} = 80 \mu\text{Wb}$   
 $\phi_{\max} = 148 \mu\text{Wb}$

**2. Aufgabe**

- (b)  $\underline{U}_1 = 230 \text{ V}$   
 $\underline{U}_2 = \underline{U}_4 = (8,36 + j29,9) \text{ V}$   
 $\underline{U}_3 = (213,3 - j59,7) \text{ V}$
- (c)  $L_1 = 165 \text{ mH}$
- (d)  $R = 25 \Omega$   
 $P_{\max} = 529 \text{ W}$   
 $\lambda = 0,587$

**3. Aufgabe**

- (b)  $\underline{U}_{AB} = 2,5 \text{ V}$   
 $\underline{U}_{CD} = (0,75 + j1) \text{ V}$
- (c)  $I_{\max} = 111,8 \text{ mA}$