

一、填空题

1. 2Ω ; 16V
2. 4H
3. 2A
4. 0.02H ; 50
5. 0.4mJ
6. 5V

二、计算题

1. $u_1 = -2\text{V}, u_2 = 7\text{V}$

2. $\dot{I}_1 = (4 + j3)\text{A}, \dot{I}_2 = (4 + j1)\text{A}, \dot{I}_3 = j1\text{A}$

3. $u_c(t) = (12 - 6e^{-10t})\text{V}, t \geq 0;$

$$i_1(t) = (2 - 0.6e^{-10t})\text{A}, t > 0$$

4. (1)
$$\begin{cases} U_1 = 3I_1 + 5I_2 \\ U_2 = -6I_1 - 4I_2 \end{cases}$$

(2) Π 形等效电路略; $Y_1 = -\frac{1}{2}\text{S}; Y_2 = -\frac{1}{9}\text{S}; Y_3 = \frac{5}{18}\text{S}; g = \frac{11}{18}\text{S}$

5. $R = 2000\Omega, L = 1\text{mH}$ 时: $P_{\max} = 5\text{mW}$

6. $u_1(t) = 31.5\sqrt{2}\cos(t - 8.7^\circ)\text{V}$