

一、填空题

1.  $30\Omega$

2.  $6V$

3.  $0.5mH ; \frac{1}{3}$

4.  $u_1 = -\frac{1}{n}u_2, i_1 = ni_2$

5.  $0.2s$

6.  $10\mu F ; 0.1\sqrt{2}\cos(1000t - 90^\circ)A$

二、计算题

1.  $P_{6V} = 14W, P_{2A} = -14W$

2.  $16W$

3. (1) 相量模型略

(2)  $H(j\omega) = \frac{1}{1.01 - \omega^2 + j0.2\omega}$

(3)  $u_2(t) = 3.3\sqrt{2}\cos(2t - 172.4^\circ)V$

4. (1)  $20V, 12\Omega$

(2)  $0.5J, 3.2J$

5. (1) 复频域模型略

(2)  $u_C(t) = (16e^{-2t} - 4e^{-5t})\varepsilon(t)V$   
 $i_L(t) = 4(e^{-2t} - e^{-5t})\varepsilon(t)A$

6. (1)  $A = \begin{bmatrix} 1 & 2\Omega \\ \frac{1}{8}S & \frac{5}{4} \end{bmatrix}$

(2)  $i_L(t) = 1.6(1 - e^{-5t})A, t \geq 0$