1．$R = 2\Omega$

2．$I_x = 5\text{A}$；$P_{2\text{I}} = 100\text{W}$

3．(1) 电流表A_1的读数为10A，和A_2的读数为0A；

(2) 功率表的读数为2366W

4．$u(t) = \left(1 - \frac{2}{3} \times 10^{-3} \sin 10t\right)\text{V}$，

$i(t) = \left(1 - \frac{1}{3} \times 10^{-3} \sin 10t\right)\text{A}$

5．$\omega = 1000\ \text{rad/s}$；$U_0 = 206.2\text{V}$

6．$$\begin{aligned} i_{L2}(t) &= \left(2 + 2\sqrt{2}\sin(10^3 t - 90°) + \sqrt{2}\sin(2\times 10^3 t + 180°)\right)\text{A} \\ &= \left(2 + 2\sqrt{2}\sin(10^3 t - 90°) - \sqrt{2}\sin 2\times 10^3 t\right)\text{A} \end{aligned}$$；

有效值为：$I_{L2} = \sqrt{2^2 + 2^2 + 1} = 3\ \text{A}$

7．$i_{L2}(t) = \left(0.6 + 1.2e^{-2t}\right)\text{A} \quad (t \geq 0)$；

$i(t) = \left(0.6 + 0.24e^{-2t}\right)\text{A} \quad (t \geq 0)$

8．$u_C(t) = \left(9 + 14e^{-3t} - 2e^{-7t}\right)\text{V} \quad (t \geq 0)$

9．$P = 50\text{W}$

10．$R = 20\Omega$；$X_L = 10\Omega$；$X_C = 20\Omega$