

ELECTRICAL CIRCUIT THEORY

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Task II_2

It is considered a complex electrical circuit with the current controlled current source, Figure II_2. An independent voltage generator acts within the circuit, $e(t) = 6 \text{ [V]}$.

At the moment $t = 0$ the switch is instantly open. Recently, a circuit was in the steady DC state.

There is also familiar: $R = 10 \text{ } \Omega$; $L = 10$; $C = 0,6$; $a = 0,5$ (time normalized).

Using Laplace transform or method of equivalent circuit in the complex domain, determine the condenser voltage in time domain, according to the stated polarity, $u_C(t) = ?$, $t \geq 0$.

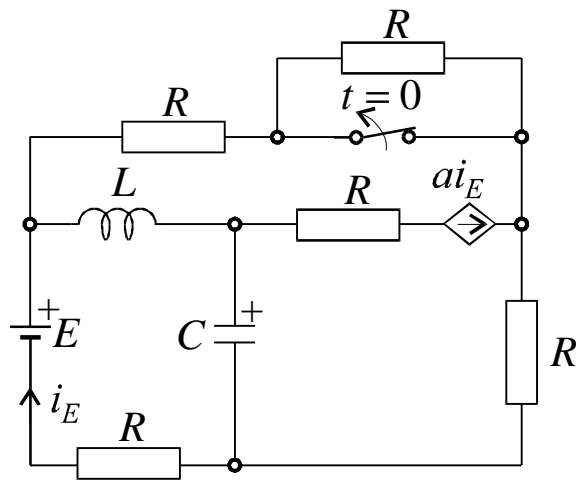


Fig. II_2