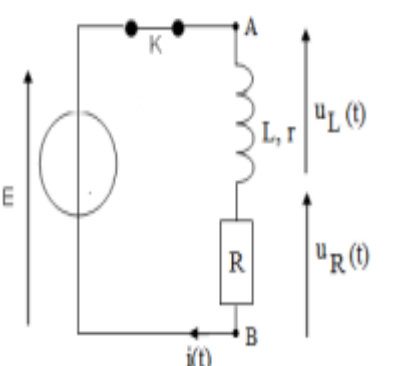
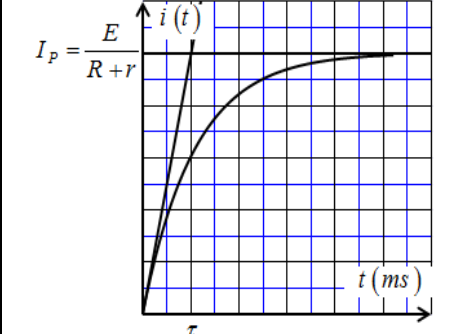
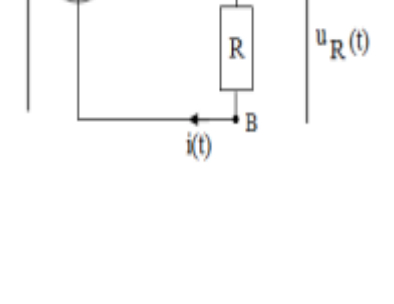
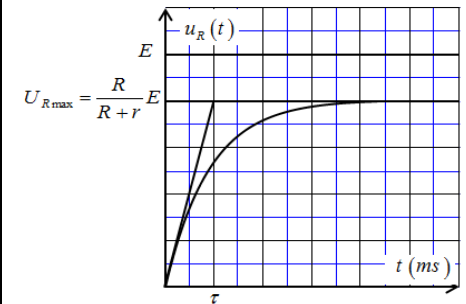
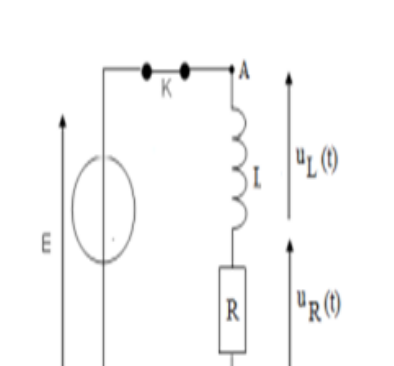
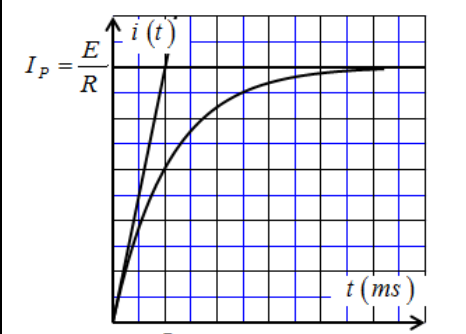
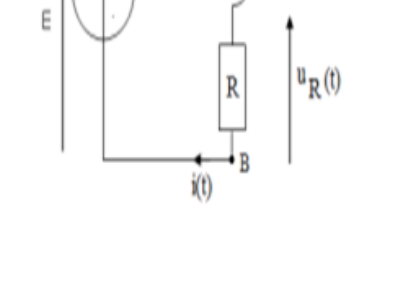


	Selon la loi d'additivité des tension on a $u_L + u_R = E$ $L \frac{di}{dt} + r.i + R.i = E$ $L \frac{di}{dt} + (r + R).i = E$ $\frac{L}{r + R} \frac{di}{dt} + i = \frac{E}{r + R}$	$i(t) = A \left(1 - e^{-\frac{t}{\tau}} \right) \Leftrightarrow i(t) = A - Ae^{-\frac{t}{\tau}} \Leftrightarrow \frac{di}{dt} = \frac{A}{\tau} e^{-\frac{t}{\tau}}$ $\frac{L}{R + r} \left(\frac{A}{\tau} e^{-\frac{t}{\tau}} \right) + A - Ae^{-\frac{t}{\tau}} = \frac{E}{R + r}$ $Ae^{-\frac{t}{\tau}} \left(\frac{L}{R + r} \frac{1}{\tau} - 1 \right) = \frac{E}{R + r} - A \Leftrightarrow \begin{cases} \tau = \frac{L}{R + r} \\ A = \frac{E}{R + r} \end{cases}$	
	Selon la loi d'additivité des tension on a $u_L + u_R = E$ $L \frac{di}{dt} + r.i + R.i = E \Leftrightarrow L \frac{di}{dt} + (r + R).i = E$ $\frac{L}{r + R} \frac{di}{dt} + i = \frac{E}{r + R} \Leftrightarrow \frac{L}{r + R} \frac{d(Ri)}{dt} + (R.i) = \frac{RE}{r + R}$ $\frac{L}{r + R} \frac{du_R}{dt} + u_R = \frac{RE}{r + R}$	$u_R(t) = A \left(1 - e^{-\frac{t}{\tau}} \right) \Leftrightarrow u_R(t) = A - Ae^{-\frac{t}{\tau}} \Leftrightarrow \frac{du_R(t)}{dt} = \frac{A}{\tau} e^{-\frac{t}{\tau}}$ $\frac{L}{R + r} \left(\frac{A}{\tau} e^{-\frac{t}{\tau}} \right) + A - Ae^{-\frac{t}{\tau}} = \frac{RE}{R + r}$ $Ae^{-\frac{t}{\tau}} \left(\frac{L}{R + r} \frac{1}{\tau} - 1 \right) = \frac{RE}{R + r} - A \Leftrightarrow \begin{cases} \tau = \frac{L}{R + r} \\ A = \frac{RE}{R + r} \end{cases}$	
	Selon la loi d'additivité des tension on a $u_L + u_R = E$ $L \frac{di}{dt} + R.i = E$ $L \frac{di}{dt} + R.i = E$ $\frac{L}{R} \frac{di}{dt} + i = \frac{E}{R}$	$i(t) = A \left(1 - e^{-\frac{t}{\tau}} \right) \Leftrightarrow i(t) = A - Ae^{-\frac{t}{\tau}} \Leftrightarrow \frac{di}{dt} = \frac{A}{\tau} e^{-\frac{t}{\tau}}$ $\frac{L}{R} \left(\frac{A}{\tau} e^{-\frac{t}{\tau}} \right) + A - Ae^{-\frac{t}{\tau}} = \frac{E}{R}$ $Ae^{-\frac{t}{\tau}} \left(\frac{L}{R} \frac{1}{\tau} - 1 \right) = \frac{E}{R} - A \Leftrightarrow \begin{cases} \tau = \frac{L}{R} \\ A = \frac{E}{R} \end{cases}$	
	Selon la loi d'additivité des tension on a $u_L + u_R = E$ $L \frac{di}{dt} + R.i = E \Leftrightarrow L \frac{di}{dt} + R.i = E$ $\frac{L}{R} \frac{di}{dt} + i = \frac{E}{R} \Leftrightarrow \frac{L}{R} \frac{d(Ri)}{dt} + (R.i) = \frac{RE}{R}$ $\frac{L}{R} \frac{du_R}{dt} + u_R = E$	$u_R(t) = A \left(1 - e^{-\frac{t}{\tau}} \right) \Leftrightarrow u_R(t) = A - Ae^{-\frac{t}{\tau}} \Leftrightarrow \frac{du_R(t)}{dt} = \frac{A}{\tau} e^{-\frac{t}{\tau}}$ $\frac{L}{R} \left(\frac{A}{\tau} e^{-\frac{t}{\tau}} \right) + A - Ae^{-\frac{t}{\tau}} = E$ $Ae^{-\frac{t}{\tau}} \left(\frac{L}{R} \frac{1}{\tau} - 1 \right) = E - A \Leftrightarrow \begin{cases} \tau = \frac{L}{R + r} \\ A = E \end{cases}$	