

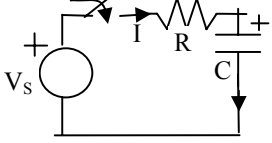
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			7					7		7	7		
			8					8		8	8		
			9					9		9	9		

HOMOJEN+ÖZEL COZUM Metodu ile cozum

1.a)Sekildeki devrede Anahtar kapatildiktan sonra devre

denklemleri $\frac{dV_c}{dt} + \frac{1}{RC} V_c = \frac{1}{RC} V_s$ seklinde

yazilabilecegini gosterin. R, C, degerleri tabloda verilmistir. (Cozum verilmistir)



b)V_c(0)=A Volt, V_s=0 Volt icin V_c(t) yi hesaplayin ve cizin.

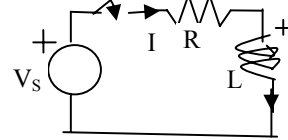
c) $I = C \frac{dV_c}{dt}$ tanim bagintisini kullanarak I(t) yi

hesaplayin ve cizin.

d)V_c(0)=D Volt, V_s=P Volt icin V_c(t) yi hesaplayin ve cizin.

e)V_c(0)=E Volt, V_s=P Volt icin V_c(t) yi hesaplayin ve cizin.

2.a)Sekildeki devrede Anahtar kapatildiktan sonra devre denklemleri $\frac{dI_L}{dt} + \frac{R}{L} I_L = \frac{1}{L} V_s$ seklinde yazilabilecegini gosterin. R, L, degerleri tabloda verilmistir.



b) I_L(0)=A Amper, V_s=0 Volt icin I_L(t) yi hesaplayin ve cizin.

c) $V_L = L \frac{dI_L}{dt}$ tanim bagintisini kullanarak V_L(t) yi

hesaplayin ve cizin.

d) I_L(0)=D Amper, V_s=P Volt icin I_L(t) yi hesaplayin ve cizin.

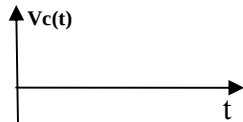
e) I_L(0)=E Amper, V_s=P Volt icin I_L(t) yi hesaplayin ve cizin.

1.a) $-V_s + RI + V_c = 0$
 $-V_s + RC \frac{dV_c}{dt} + V_c = 0$
 $\frac{dV_c}{dt} + \frac{1}{RC} V_c = \frac{1}{RC} V_s$

2.a) $-V_s + RI + V_L = 0$
 $-V_s + RI + L \frac{dI_L}{dt} = 0$
 $\frac{dI_L}{dt} + \frac{R}{L} I_L = \frac{1}{L} V_s$

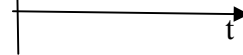
1.b, 1.c)

V_c(t)=



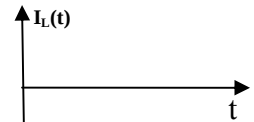
I_L(t)

I_c(t)=



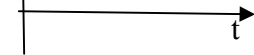
2.b, 2.c)

I_L(t)=



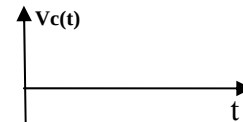
V_L(t)

V_L(t)=



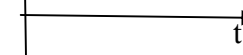
1.d, 1.e)

V_c(t)=



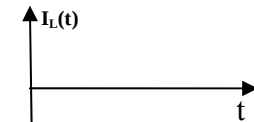
V_c(t)

V_c(t)=



2.d, 2.e)

I_L(t)=



I_L(t)

I_L(t)=

