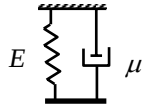
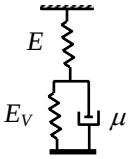
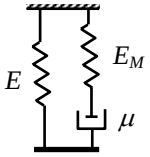
CREEP & RELAXATION RESPONSES OF DISCRETE VISCOELASTIC MODELS

Input	$\sigma(t)=\sigma_0 H(t)$	$\varepsilon(t)=\varepsilon_0 H(t)$
Model	**Creep Response**	**Relaxation Response**
 Voight	$\varepsilon(t)=\frac{\sigma_0}{E}\left[1-\exp\left(-\frac{E}{\mu}t\right)\right]$	$\sigma(t)=E\varepsilon_0$
 Maxwell	$\varepsilon(t)=\frac{\sigma_0}{E}\left(1+\frac{E}{\mu}t\right)$	$\sigma(t)=E\varepsilon_0\exp\left(-\frac{E}{\mu}t\right)$
 SLS-V	$\varepsilon(t)=\sigma_0\left\{\frac{1}{E}+\frac{1}{E_V}\left[1-\exp\left(-\frac{E_V}{\mu}t\right)\right]\right\}$	$\sigma(t)=E\varepsilon_0\left\{1-\frac{E}{E+E_V}\left[1-\exp\left(-\frac{E+E_V}{\mu}t\right)\right]\right\}$
 SLS-M	$\varepsilon(t)=\frac{\sigma_0}{E}\left[1-\frac{E_M}{E+E_M}\exp\left(-\frac{E}{E+E_M}\frac{E_M}{\mu}t\right)\right]$	$\sigma(t)=\varepsilon_0\left[E+E_M\exp\left(-\frac{E_M}{\mu}t\right)\right]$