## ENGG103 Autumn 23 formulae



## **ENGG103 Final Exam Sample Formulae**

$E_{cl} = E_m V_m + E_f V_f$	$A_f = V_f A$ $A_m = V_m A$
$\frac{F_f}{F_m} = \frac{E_f V_f}{E_m V_m}$	$\Delta l = \alpha l_0 \Delta T$
$\sigma = \frac{1}{\rho}$	$\sigma = -E\alpha_l \Delta T$ $\sigma = E\alpha_l (T_o - T_f)$
$R = \frac{V}{I}$	$\rho = \frac{RA}{l}$
$P = \frac{V^2}{R}$	$\sigma =  q n(\mu_n)$
$\sigma =  q p(\mu_p)$	$\sigma =  q n_i(\mu_n + \mu_e)$
$C = \left(\frac{Q}{m\Delta T}\right)$	$DP = \frac{\overline{M}}{m_a}$
$\overline{M}_n = \sum_i x_i M_i$	$r = d\sqrt{N}$ $L = Nd. \sin\left(\frac{\theta}{2}\right)$
$\overline{M}_w = \sum_i w_i M_i$	$W_L = \frac{C_{\alpha} - C_0}{C_{\alpha} - C_L}$

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