

25-26 Physics 200 Final Exam Formulas:

$$\bar{v} = \frac{v + v_0}{2} \quad \bar{v} = \frac{\Delta x}{\Delta t} \quad v = v_0 + at$$

$$a = \frac{\Delta v}{\Delta t} \quad \Delta x = v_0 t + \frac{1}{2} at^2 \quad v^2 = v_0^2 + 2a\Delta x$$

$$\Sigma F = ma \quad F_f = \mu F_N \quad w = mg$$

$$\Sigma F_c = \frac{mv^2}{r} \quad F_g = G \frac{m_1 m_2}{r^2}$$

$$W = Fd \quad P = \frac{W}{t} \quad F_{\text{spring}} = -kx$$

$$KE = \frac{1}{2} mv^2 \quad PE_g = mgh \quad PE_s = \frac{1}{2} kx^2$$

$$PE_0 + KE_0 + W_{nc} = PE + KE$$

$$p = mv \quad m_1 v_1 + m_2 v_2 = m_1 v'_1 + m_2 v'_2$$

$$F\Delta t = \Delta p \quad \Delta p = p - p_0 \quad F\Delta t = m\Delta v$$

$$\tau = rF \quad \tau = I\alpha$$

$$\omega = \frac{\Delta \theta}{\Delta t} \quad \alpha = \frac{\Delta \omega}{\Delta t}$$

$$s = \theta r \quad v = \omega r$$

$$a = \alpha r \quad \Delta \theta = \omega_0 t + \frac{1}{2} \alpha t^2$$

$$F_e = \frac{k|q_1 q_2|}{r^2}$$

$$E = \frac{F_e}{q}$$

$$I = \frac{Q}{t} \quad I = \frac{V}{R}$$

$$P = IV$$

$$R_{\text{Tot (series)}} = R_1 + R_2 + R_3 \dots \quad \frac{1}{R_{\text{Tot (parallel)}}} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} \dots$$