

Answers Exam 3 2017

$$2. \quad \omega = \frac{m_3 r_1}{s (m_1 + m_2 + m_3)} \text{ CCW}$$

$$3. \quad U = - \frac{G m_0 m_s}{r} + \text{const}$$

$$W = G m_0 m_s \left(\frac{1}{R_2} - \frac{1}{R_1} \right)$$

$$4. \quad \vec{c} = m g r \vec{i}_\theta - r m (2c, \omega + r \alpha) \vec{i}_z$$

$$r = c, t$$

$$\omega(t) = \frac{I}{m(c,t)^2 + I} \omega_0$$

$$d = - \frac{2 m c, t^2 I \omega_0}{(m(c,t)^2 + I)^2}$$