

Test 3 Equations that you need to memorize

Chapter 5

$$1 \text{ cal} = 4.184 \text{ J}$$

$$1 \text{ kcal} = 4.184 \text{ kJ}$$

$$q = C\Delta T$$

$$q = mc\Delta T$$

$$\Delta U = q + w$$

$$\Delta H_{\text{rxn}}^{\circ} = \sum \Delta H_{\text{f}}^{\circ}(\text{products}) - \sum \Delta H_{\text{f}}^{\circ}(\text{reactants})$$

$$\Delta H_{\text{rxn}} = \frac{q_{\text{rxn}}}{\text{mol}_{\text{LR}}}$$

Chapter 6

$$c = \lambda \nu$$

$$E_{\text{photon}} = h\nu = \frac{hc}{\lambda}$$

$$\Delta E_{\text{atom}} = -2.179 \times 10^{-18} \text{ J} \left(\frac{1}{n_{\text{final}}^2} - \frac{1}{n_{\text{initial}}^2} \right)$$

$$E_{\text{photon}} = |\Delta E_{\text{atom}}|$$