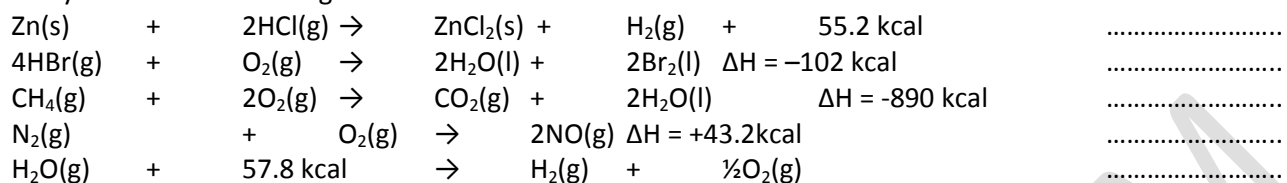


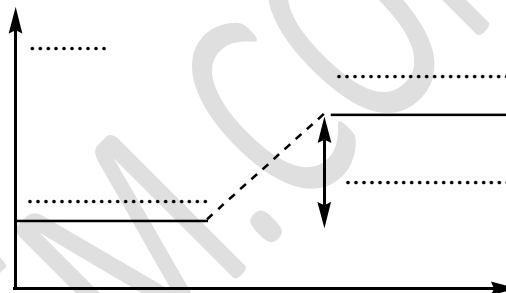
SAMPLE QUESTIONS

HEAT of REACTIONS

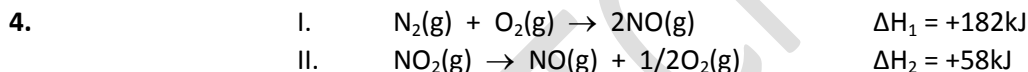
1. Identify each of the following reactions as exothermic and endothermic.



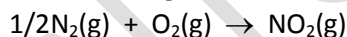
2. Complete the following diagram below according to following reaction.



3. Find the heat of the reaction (ΔH) $\text{SO}_2(\text{g}) + \frac{1}{2} \text{O}_2(\text{g}) \rightarrow \text{SO}_3(\text{g})$ by using ΔH_f° of the compounds given
 $\Delta H_f^\circ (\text{SO}_2) = -297 \text{ kJ/mol}$, $\Delta H_f^\circ (\text{SO}_3) = -396 \text{ kJ/mol}$



By using the reactions above, find ΔH for the given reaction.



5. Calculate the temperature change in a calorimeter when 8 g of SO₃ gas is produced during its formation according to reaction below. (S: 32, O: 16, $\Delta H_f^\circ (\text{SO}_2) = -297 \text{ kJ/mol}$, $\Delta H_f^\circ (\text{SO}_3) = -396 \text{ kJ/mol}$, $C_{\text{calorimeter}} = 2.4 \text{ kJ/}^\circ\text{C}$)

