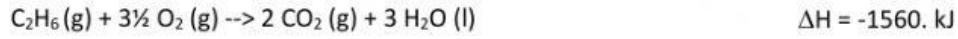




## مدرسة عائشة بنت عثمان الحلقة الاولى و الثانية و التعليم الثانوي

## ورقة عمل قانون هس 12A\

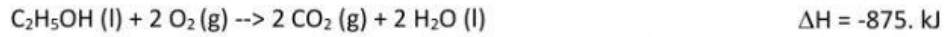
1. Calculate  $\Delta H$  for the reaction:  $C_2H_4 (g) + H_2 (g) \rightarrow C_2H_6 (g)$ , from the following Data.



2. Calculate  $\Delta H$  for the reaction  $4 NH_3 (g) + 5 O_2 (g) \rightarrow 4 NO (g) + 6 H_2O (g)$ , from the following Data.



3. Find  $\Delta H^\circ$  for the reaction  $2H_2(g) + 2C(s) + O_2(g) \rightarrow C_2H_5OH(l)$ , using the following thermochemical data.



4. Calculate  $\Delta H$  for the reaction  $CH_4 (g) + NH_3 (g) \rightarrow HCN (g) + 3 H_2 (g)$ , given:



