Marks
3

• Consider the following reaction and associated thermochemical data?
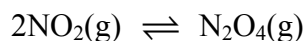
$$2NO_2(g) \rightleftharpoons N_2O_4(g)$$

Data:

Compound	$NO_2(g)$	$N_2O_4(g)$
$\Delta_f H°$ / kJ mol^{-1}	33	9
$S°$ / J K^{-1} mol^{-1}	240	304

What is the expression for the equilibrium constant, K_c, for this reaction?

What are the values of $\Delta H°$ and $\Delta S°$ for the reaction?

$\Delta H° =$

$\Delta S° =$

What is the value of $\Delta G°$ for the reaction at 298 K?

$\Delta G° =$

THE REMAINDER OF THIS PAGE IS FOR ROUGH WORKING ONLY.