**Introduction to Equilibrium Review Worksheet Answers**

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| **1.** | **The red colour persists.  Shaking the flask will dissolve the gas and the solution should turn colourless again.** |
| **2.** | **Keq = 3.0** |
| **3.** | **a) pressure** |
|  | **b) pressure** |
|  | **c) pressure** |
|  | **d) colour** |
|  | **e) colour** |
| **4.** | **a)   to the right** |
|  | **b)   to the right** |
|  | **c)   to the left** |
|  | **d)   at constant V then no change (at constant pressure then to the right)** |
|  | **e)   no change** |
| **5.** | **(a) decrease the pressure by increasing the volume, decrease the temperature** |
|  | **(b) increase the temperature, changing the pressure or volume will have no effect** |
|  | **(c) increase the temperature, changing the pressure or volume will have no effect** |
| **6.** | **It will increase as the temperature increases because the reaction is endothermic and an increase of temperature favours an increase in the product concentration** |
| **7.** | **a)   [CD] = 0.17 mole/L  [C] = [D] = 0.03 mole/L** |
|  | **b)   Keq = 0.0053** |
| **8.** | **40% was converted** |
| **9.** | **Keq = 0.00263** |
| **10.** | **Keq = 3** |
| **11.** | **a)   Keq = [N2O4]/[NO2]2 = 1.15** |
|  | **b)   [N2O4] = 0.2875 mole/L** |
| **12.** | **a)  [N2] = 0.1 mole/L** |
|  | **b) [NH3] = 0.8 mole/L** |
|  | **c) Keq = 0.0042** |
|  | **d) to the left** |
|  | **e) no change** |
|  | **f) no chnage** |
| **13.** | **a) [CO2] = [H2] = 0.2 mole/L;  [H2O] = [CO] = 0.3 mole/L** |
|  | **b) No** |
| **14.** | **a) Keq = 12.5** |
|  | **b) Keq = 0.283** |
|  | **c) F** |
|  | **d) F** |
|  | **e) T** |
|  | **f)  T** |
|  | **g) F** |
|  | **h)  T** |
|  | **i)  T** |
|  | **j)  F** |
|  | **k) T** |
|  | **l)  F** |
|  | **m)  F** |
|  | **n)  F** |
|  | **o)  T** |
|  | **p)  F** |
|  | **q) F** |