1. Which of the following will increase the rate of backward reaction in a reversible reaction?

Increase in concentration of one of the reactants
Decrease in concentration of one of the products
Increase in concentration of one of the products
None of the above

2. What is the effect of increase in temperature on the rate of a reaction in which heat is given out?

Rate increases.
Rate decreases.
No change occurs.
Initially rate increases and then decreases.

3. Which of the following would favor a reaction in which heat is absorbed?

High temperature
Low temperature
Increase in pressure
No change in temperature

4. Reaction between iron and steam is reversible if carried out:

At constant temperature.
At constant pressure.
In an open vessel.
In a closed vessel.

5. What is the effect of increasing pressure on the following reaction at equilibrium?

$2A\,(g) + B\,(g) \rightleftharpoons C\,(g) + 2D\,(g)$

Forward reaction is favored.
Backward reaction is favored.
Equilibrium is not affected.
Temperature increases.

6. For the reaction $CO\,(g) + H_2O\,(g) \rightleftharpoons CO_2\,(g) + H_2\,(g)$ at equilibrium, the amount of CO_2 is increased by:

Adding a catalyst.
Decreasing the volume.
Increasing the pressure.
Increasing the amount of CO.

7. Which of the following increases the yield of ammonia in the following reaction:

$N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g)$ exothermic reaction

Low temperature, low pressure
Low temperature, high pressure
High temperature, high pressure
High temperature, low pressure

8. Which of the following favors the formation of SO_3 in the following reaction:

$2SO_2(g) + O_2(g) \rightleftharpoons 2SO_3(g)$

Removal of SO2
Increase in pressure
Removal of oxygen
Increase in volume