

AQA, OCR, Edexcel

GCSE Science

GCSE Chemistry

Equilibrium
Questions

M M E

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Total Marks: /24

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Reversible reactions and dynamic equilibrium

Reversible reactions

Q1: What is a reversible reaction?

(2 marks)

Q2: How can the direction of a reversible reaction be changed?

(1 mark)

Energy changes and reversible reactions

Q3: Complete the sentences in regard to distribution of energy in reversible reactions.

If a reversible reaction is _____ in one direction, it is _____ in the other. The _____ amount of energy is transferred in each case.

(3 marks)

Equilibrium

Q4: If a reversible reaction occurs in apparatus which prevents the escape of reactants and products, when would equilibrium be reached?

(2 marks)

The effect of changing conditions on equilibrium

Q5: If a system is at equilibrium and a change is made to any of the conditions, how does the system respond?

(1 mark)

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Q6: Is the following statement true or false?

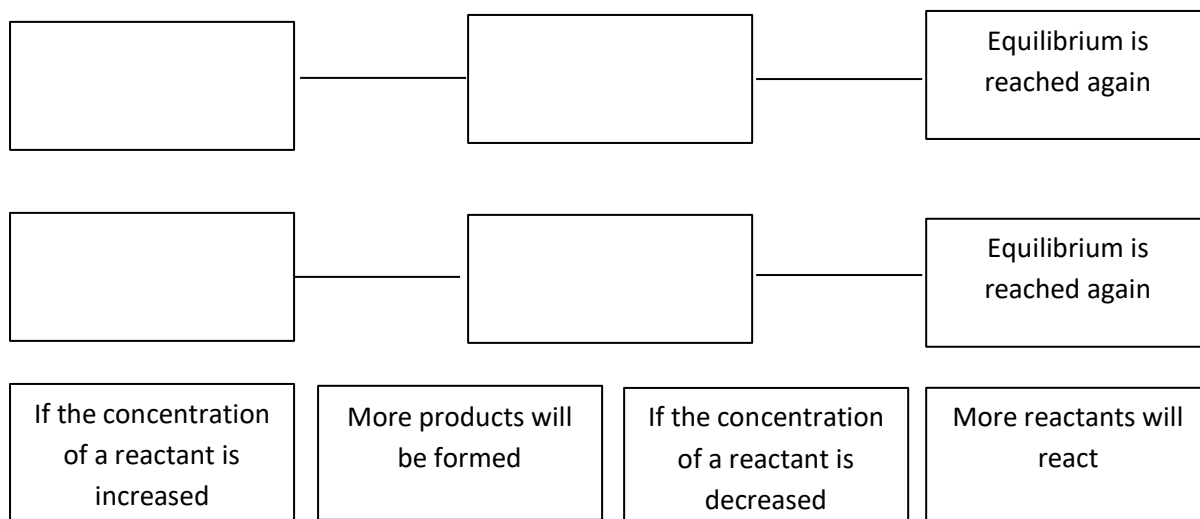
Even if the concentration of one of the reactants or products is changed, the system remains at equilibrium.

True/False

Explain your answer.

(2 marks)

Q7: Using the boxes provided complete the diagram.



(4 marks)

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The effect of temperature changes on equilibrium

Q8: Complete the tables using the information in the boxes.

If the temperature of a system at equilibrium is increased:	If the temperature of a system at equilibrium is decreased:

The relative amount of products at equilibrium increases for an exothermic reaction.

The relative amount of products at equilibrium decreases for an exothermic reaction.

The relative amount of products at equilibrium increases for an endothermic reaction.

The relative amount of products at equilibrium decreases for an endothermic reaction.

(4 marks)

The effect of pressure changes on equilibrium

Q9: For gaseous reactions at equilibrium, complete the following sentences.

An _____ in pressure causes the equilibrium position to shift towards the side with the _____ number of molecules.

A _____ in pressure causes the equilibrium position to shift towards the side with the _____ number of molecules.

(2 marks)

Le Chatelier's Principle

Q10: What is Le Chatelier's principle and why is it important?

(3 marks)