Rates of reaction and equilibrium

Chemistry Paper 2 | 30 quick questions

GCSE science knowledge recall

Answer online, marked instantly

Name: _____ **Date:** _____ **Score:** _____ **/ 30**

1 Mean rate of reaction = quantity of product formed ÷ what?

2 What is the unit of rate when the volume of gas made is measured in cm^3 and time in seconds?

3 What is the unit of rate when mass lost is measured in grams and time in seconds?

4 What is the unit of rate when the amount of product is measured in moles and time in seconds?

Higher

5 To find the rate at one moment from a curved graph, what do you draw on the curve before finding its gradient?

Higher

6 On a graph of product made against time, at what point is the reaction usually fastest?

7 What is the name of the theory that says reactions happen when particles collide with enough energy?

8 What is the name for the minimum energy colliding particles need in order to react?

9 What happens to the rate of a reaction when the temperature is increased?

10 A solution is made more concentrated. What happens to the frequency of collisions?

11 For reacting gases, increasing which condition has the same effect as increasing concentration in a solution?

12 The same mass of marble is added to acid as one lump or as powder. Which reacts faster?

13 Which property is larger for a powder than for a lump of the same mass?

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14 Explain, in terms of particles, why raising the temperature increases the rate of reaction.

15 What is the name for a substance that speeds up a reaction without being used up?

16 A catalyst gives a different reaction pathway with a _____ activation energy. Higher or lower?

17 What are biological catalysts called?

18 Is a catalyst written as a reactant in the balanced equation? Answer yes or no.

19 Which piece of apparatus can be used to collect and measure the volume of gas given off in a rate experiment?

20 Sodium thiosulfate reacts with hydrochloric acid and the mixture turns cloudy. Which element forms as the yellow solid?

21 What does the symbol ⇌ show in a chemical equation?

22 Blue hydrated copper sulfate is heated. What colour does it turn?

23 The forward reaction of a reversible reaction is endothermic. Is the reverse reaction exothermic or endothermic?

24 Equilibrium can only be reached in what kind of system?

25 At equilibrium, how do the rates of the forward and reverse reactions compare?

26 Whose principle predicts how an equilibrium responds when conditions are changed?

Higher

27 The concentration of a reactant is increased. Does the equilibrium shift towards the reactants or the products?

Higher

28 The temperature of an equilibrium is raised. Does it shift in the direction of the exothermic or the endothermic reaction?

Higher

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29 The pressure on a gas equilibrium is raised. It shifts towards the side with more or fewer molecules?

Higher

30 For $N_2 + 3H_2 \rightleftharpoons 2NH_3$, explain why raising the pressure increases the yield of ammonia.

Higher

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