

Retrieval Practice: Year 12 Number 1

Rules: Never look at your notes for retrieval practice! Do as many as you can, even if they are educated guesses. When you have tried (hard!) to answer them all, check the mark scheme and rate each question:



Easy, remembered perfectly



Harder - could remember part of it or was familiar when I saw the answer



Very hard - didn't recognise the answer so need to go back over this

	Question	Answer	Rating
1	Define the term hydrocarbon		
2	Calculate the number of moles in 0.88 g CO ₂		
3	Give the formula of sodium hydroxide		
4	Give the formula of a sulfate ion		
5	Write a word equation for the reaction between magnesium oxide and hydrochloric acid		
6	Write a balanced equation for the complete combustion of methane		
7	State the colour change when bromine is added to an alkene		
8	Name the element with the electron configuration 2, 8, 5		
9	Give the number of protons, neutrons and electrons in the species ²⁵ Mg ²⁺		
10	Define the term exothermic		
11	Explain why aluminium conducts electricity		
12	Explain (in terms of particles and collisions) how increasing concentration affects reaction rate		
13	Define the term isotope		
14	Draw the repeat unit of poly(ethene)		
15	Draw a dot and cross diagram of carbon dioxide		

	Question	Answer
1	Define the term hydrocarbon	A substance/compound/molecule containing only hydrogen and carbon
2	Calculate the number of moles in 0.88 g CO ₂	$0.88 / 44 = 0.02$ moles
3	Give the formula of sodium hydroxide	NaOH
4	Give the formula of a sulfate ion	SO ₄ ²⁻
5	Write a word equation for the reaction between magnesium oxide and hydrochloric acid	Magnesium oxide + hydrochloric acid → magnesium chloride + water
6	Write a balanced equation for the complete combustion of methane	$\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$
7	State the colour change when bromine is added to an alkene	From orange/yellow/brown to colourless
8	Name the element with the electron configuration 2, 8, 5	Phosphorous
9	Give the number of protons, neutrons and electrons in the species ²⁵ Mg ²⁺	12 protons, 13 neutrons, 10 electrons
10	Define the term exothermic	A reaction that releases energy to the surroundings/produces heat
11	Explain why aluminium conducts electricity	The <u>delocalised electrons</u> are <u>free to move</u> and carry charge.
12	Explain (in terms of particles and collisions) how increasing concentration affects reaction rate	<ul style="list-style-type: none"> - More particles in a given volume / particles closer together - So they collide more <u>often</u>/more <u>frequent</u> collisions
13	Define the term isotope	Atoms (of the same element) with the same number of protons/same atomic number but different number of neutrons/different mass number
14	Draw the repeat unit of poly(ethene)	$\left[\begin{array}{cc} \text{H} & \text{H} \\ & \\ -\text{C} & - & \text{C}- \\ & \\ \text{H} & \text{H} \end{array} \right]_n$
15	Draw a dot and cross diagram of carbon dioxide	$\begin{array}{c} \cdot\cdot \\ \cdot\cdot \\ \times \\ \times \end{array} \text{O} \begin{array}{c} \times \\ \times \\ \times \\ \times \end{array} \text{C} \begin{array}{c} \times \\ \times \\ \times \\ \times \end{array} \text{O} \begin{array}{c} \cdot\cdot \\ \cdot\cdot \\ \cdot\cdot \\ \cdot\cdot \end{array}$