

Grade Nine Guides

GCSE CHEMISTRY

Paper 1

ATOMIC STRUCTURE &

THE PERIODIC TABLE

EXAM QUESTIONS

- Exam questions per topic

Aiming at grade 8/9



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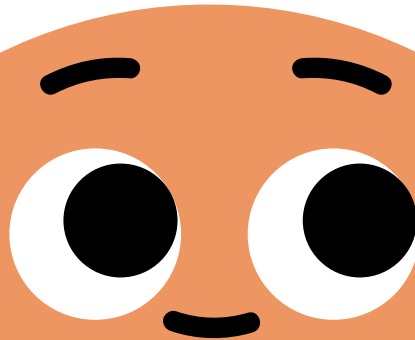
Chemistry - Paper 1

| Topic | Question [marks] | Answer |
|---|---|--------|
| Atomic structure and the periodic table | <ul style="list-style-type: none"> > Define the mass number of an atom [1 mark] > Chadwick's experimental work on the atom led to a better understanding of isotopes. Explain how his work led to this understanding. [3 marks] | |
| | <ul style="list-style-type: none"> > Explain how evidence from the alpha particle scattering experiment led to a change in the model of the atom from the plum pudding model [4 marks] | |
| | <ul style="list-style-type: none"> > State two observations made about this reaction: $\text{Mg} + \text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$ [2] | |
| | <ul style="list-style-type: none"> > Explain how a covalent bond holds together 2 atoms [2] | |
| | <ul style="list-style-type: none"> > Describe how Mendeleev improved Newlands' periodic table | |
| | <ul style="list-style-type: none"> > Why did Mendeleev's periodic table become more widely accepted than previous versions? [2] | |
| | <ul style="list-style-type: none"> > Give two reasons why the discovery of Gallium helped Mendeleev's periodic table being accepted [3] | |
| | <ul style="list-style-type: none"> > What is the modern name for atomic weight? [2] | |
| | <ul style="list-style-type: none"> > In the modern periodic table, the elements are arranged in order of.. [1] | |
| | <ul style="list-style-type: none"> > The plum pudding model did not have a nucleus. Describe three other differences between the nuclear model of the atom and the plum pudding model. [3 marks] | |
| | <ul style="list-style-type: none"> > Describe the change that Bohr made to the nuclear model. [2 marks] | |
| | <ul style="list-style-type: none"> > A student suggested Mendeleev's reason for reversing the order was to arrange the | |

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| | <p>elements in order of atomic number. Explain why the student's suggestion cannot be correct.</p> <p>[2 marks]</p> <ul style="list-style-type: none">- Give the correct reason➤ Describe what you would see when sodium reacts with chlorine. <p>[2 marks]</p> <ul style="list-style-type: none">➤ Explain where the reactivity increases going down Group 1 <p>[4]</p> <ul style="list-style-type: none">➤ Compare the chemical and physical properties of transition elements and Group One elements <p>[6]</p> <ul style="list-style-type: none">➤ Explain in terms of electronic structure why fluorine is the most reactive element in Group 7 [3] | |
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