

## C2 Topic 1 Atomic structure

| Atomic structure recap   |   |
|--|---|
| 1. What is a proton?   | A subatomic particle found in the nucleus, it has a positive charge                                   |
| 2. What is a neutron?  | A subatomic particle found in the nucleus, it has no charge   |
| 3. What is an electron?  | A subatomic particle found in the nucleus, it has a negative charge                                   |
| 4. What is the charge of a proton?                                     | Positive (+1)   |
| 5. What is the charge of a neutron?                                    | No charge (0)   |
| 6. What is the charge of an electron?                                  | Negative (-1)   |
| Atomic number, mass number and relative masses of sub-atomic particles |   |
| 7. What is atomic number?  | The number of protons in an atom  |
| 8. What is mass number?  | The combined number of protons and neutrons in an atom  |
| 9. What is the relative mass of a proton?                              | 1   |
| 10. What is the relative mass of an electron?                          | 0   |
| 11. What is the relative mass of a neutron?                            | 1   |
| Isotopes   |   |
| 12. What is an isotope?  | Atoms of an element with the same number of protons but a different number of neutrons                |
| 13. Which number is the same for different isotopes of an element?     | The atomic number   |
| 14. Which number is different for different isotopes of an element?    | The mass number   |
| 15. What is relative atomic mass?                                      | The mass of an atom compared to a twelfth of the mass of a carbon atom                                |
| Formula mass and the mole  |   |
| 16. What is relative formula mass?                                     | The combined relative atomic masses of all the atoms in a compound                                    |
| 17. What is a mole (of substance)?                                     | The number of particles in a substance- 1 mole of any substance contains $6 \times 10^{23}$ particles |
| 18. What is the relative formula mass of H <sub>2</sub> O?             | 18  |
| 19. What is the relative formula mass of CO <sub>2</sub> ?             | 44  |
| 20. What is the relative formula mass of NH <sub>3</sub> ?             | 17  |
| 21. What is the relative formula mass of CaCO <sub>3</sub> ?           | 100   |