

Basic atomic structure

- 1) a) What three particles are atoms made from? (3)
 b) Which particles are in the nucleus? (2)
 c) Explain why atoms are neutral even though they contain positive and negative particles. (2)
- 2) a) Define the atomic (or proton) number of an atom. (1)
 b) Define the mass number of an atom. (1)
 c) Using the mass number and atomic number of an atom:
 i) How do you work out the number of neutrons in an atom? (1)
 ii) How do you work out the number of electrons in an atom? (1)
 iii) How do you work out the number of protons in an atom? (1)
- 3) Complete the table below about the structure of atoms. (21)

Atom	Atomic number	Mass number	No. of protons	No. of neutrons	No. of electrons	Electron structure
$^{40}_{18}\text{Ar}$						
$^{27}_{13}\text{Al}$						
	9	19				
	4			5		
			17	18		
		1		0		

- 4) a) What are isotopes? (2)
 b) Explain why isotopes have the same chemical properties. (2)

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