

Mark scheme – The Particle Model (H)

Question			Answer/Indicative content	Marks	Guidance
1			C ✓	1 (AO1.1)	Examiner's Comments The great majority of candidates gave the correct answer C.
			Total	1	
2			B ✓	1 (AO1.1)	Examiner's Comments The majority of the candidates correctly recalled the diameter of the atom. A small but significant number of candidates incorrectly chose response A.
			Total	1	
3			D ✓	1 (AO2.1)	Examiner's Comments Most candidates correctly substituted the numbers into the given equation.
			Total	1	
4			A	1 (AO2.1)	
			Total	1	
5			B	1	
			Total	1	
6			C	1	
			Total	1	
7	a	i	FIRST CHECK THE ANSWER ON ANSWER LINE If answer = $0.001 / 1 \times 10^{-3} \text{ (m}^3\text{)}$ award 2 marks $0.1 \times 0.1 \times 0.1 \checkmark$ $= 0.001 / 1 \times 10^{-3} \text{ (m}^3\text{)} \checkmark$	2 (AO2x2.2)	
		ii	Density = mass/volume / density is proportional to mass ✓ (Cube B has 10 x mass of cube A, so) density of cube B is 10 x density of cube A ✓	2 (AO1.2) (AO2.2)	ALLOW density is 10 times larger ALLOW numerical values used to show density of cube B is 10 x density of cube A
	b		Particles (in solid) are close(r) together / (more) compact / ORA / AW✓	1 (AO1.1)	Assume answer refers to a solid unless indicated otherwise

			Total	5	
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