

Question number	Answer	Notes	Marks
3 (a) (i)	smoke particles in air (in smoke cell) OR pollen on water OR dust particles in air;	Accept correct description of Brownian motion applied to unspecified particles in a suitable medium	1
(ii)	Any two of - MP1 Idea that tiny/smaller particles are hitting; MP2 Larger (observed) particles are moved; MP3 Idea of random motion of larger particles;	Allow zig-zag movement	2
(b)	Any six ideas about arrangement and motion of particles Max 2 for each state Solid – Regular pattern OR close packed; Vibration in position; Little space between particles; Liquid – Irregular pattern; Able to move over/past other particles; Little space between particles; Gas – No pattern; Able to move freely/fast; Larger space between particles;	Accept same ideas shown in labelled diagrams Condone fixed position Condone no fixed position Ignore vibration relating to liquid Condone no fixed position Ignore vibration relating to gas	max 6

Total 9 marks