

Question number	Answer	Notes	Marks
5 (a)	any 4 from: MP1. fewer particles outside the balloon; MP2. (hence) fewer impacts (per second) on the outside of the balloon; MP3. (hence) pressure outside balloon is reduced; MP4. pressure inside balloon > pressure outside balloon; MP5. (hence) air inside the balloon expands until the pressures balance;	condone idea that all particles have been removed  ignore references to vacuum  reject 'air particles expanding'	4
(b) (i)	pressure increases; (because) volume (of trapped air) has decreased / particles collide with liquid surface more (often);	allow walls for liquid surface	2
(ii)	water level increases / rises; greater {force / pressure} acts on the water (so can support greater weight of water above);	allow formula as justification $p = h\rho g$ (because the increased pressure difference supports a greater height of water)	2
(iii)	water level decreases / falls; (because) pressure difference is now less/eq;		2

Total for question 5 = 10 marks