

(b)	(i)	3
	(ii)	2

Statements	Order
the switch is closed	1
the lamp is on	(6)
the armature is attracted	3
the contacts are pushed together	5
the electromagnet is magnetised	2
the armature rotates	4

all five numbers in correct positions = 3 marks;;;
 three-four numbers in correct positions = 2 marks only;;
 one-two numbers in correct positions = 1 mark only;

idea that electromagnet loses its magnetism;

AND 1 of;

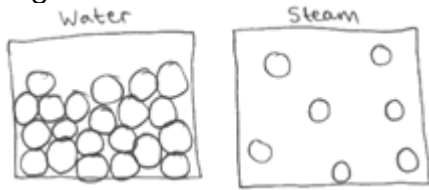
- armature no longer attracted / idea that armature moves away from the magnet
- opens the contacts / breaks the **lamp** circuit

condone idea that electromagnet is not magnetic

allow iron for armature

ignore references to current not flowing

Total for question 2 = 10 marks

Question number	Answer	Notes	Marks
3 (a)	any 2 of: MP1. particles gain kinetic energy / KE; MP2. particles move further apart; MP3. some particles escape / evaporate from the surface / become a gas/vapour;	allow particles move faster / vibrate more allow particles break bonds	2
(b)	comment about separation; e.g. particles in steam further apart comment about location of particles; e.g. steam particles fill container but water particles have a surface e.g.  = 2 marks	ignore comments referring to motion of particles allow steam takes volume of container but water doesn't allow marks if seen on a labelled diagram or writing	2
(c)	any 3 of: MP1. (average) speed / KE of particles decreases (when cooled); MP2. particles collide less often with the can; MP3. (when cooled) pressure inside the can decreases; MP4. pressure outside greater than pressure inside the can;	allow molecules for particles throughout allow 'particles join water' / steam condenses (into water) allow particles collide with the can with less force allow pressure proportional to temperature ignore references to vacuum allow RA	3

Total for question 3 = 7 marks