

Question number	Answer	Notes	Marks
11 (a) (i)	current provides a magnetic field/eq; magnets in a magnetic field experience a force/magnets line up along a field line/eq;		2
(ii)	(circular) field line through all of the compass needles; arrow clockwise;	allow any circle concentric with the wire	2
(iii)	changes direction / eq;		1
(b)	vertical; upwards;		2
(c) (i)	up / down; idea of cutting field lines;	allow any inference of up/down	2
(ii)	cutting field lines induces a voltage across the wire; complete circuit so voltage gives a current;	allow emf or potential difference or p.d. for voltage allow idea of a force on electron(s) causing them to move	2

Total for Question 11 = 11 marks