

Question number	Answer	Notes	Marks
4 (a) (i)	MP1. (due to) friction (between car and ground/air); MP2. idea of <u>electron</u> transfer;	allow idea of materials rubbing allow 'scraped off' for transfer ignore "charge", "static" reject (for MP2 mark) protons moving / positive electrons	2
(ii)	idea of an insulator OR insulating material (between car and ground);	e.g. rubber tyre allow RA e.g. 'tyre is a non-conductor' ignore comments relating to charge being unable to move e.g. 'car not earthed'	1
(b) (i)	(otherwise there would be a risk of) shock / spark / fire / explosion;	ignore "to avoid travel sickness"	1
(ii)	any 2 from: MP1. metal (strap) is a conductor; MP2. (hence) idea of current / charge moving (in the strap/metal/wire); MP3. (electrons flow) between earth/ground/road and car;	reject references to positive charge/protons allow ideas of "earthing" or "grounding" e.g. "It (charge/car) is earthed by the strap"	2

Total 6 marks