Question number	Answer	Notes	Marks
6 (a) (i)	(soft) iron;		1
(ii)	pass a current in the coil / eq;	condone reference to 'electricity'	1
(b) (i)	$N_p/N_s = V_p/V_s$;	allow any correct rearrangement allow "i(nput) and o(utput)" or "1 and 2" for "p(rimary) and s(econdary)" allow correct word equation ignore 'P' for 'N' condone 'T', 't' or 'n' for 'N' condone 'coils' for 'turns'	1
(ii)	substitution; rearrangement; evaluation to 2s.f. or more; e.g. $1500/280 = 115/V_s$ $(V_s =) 115 \times 280 / 1500$ $(V_s =)$ 21 (V)	 allow 21.4666…(V)	3
(iii)	use of transformer power formula; substitution OR rearrangement; evaluation; e.g. input power = output power OR $V_pI_p = V_sI_s$ $115 \times 1.2 = 20 \times I_s$ OR $I_s = V_pI_p/V_s$ $(I_s =)$ 6.9 (A)	 allow use of 20, 21, 21.5 etc. for output voltage allow use of turns ratio i.e. step-down voltage means step-up current allow 7 (A) allow range of 6.4-6.9	3
(iv)	any two from: MP1. increase input voltage/current; MP2. decrease number of turns on secondary coil; MP3. increase number of turns on primary coil;	 condone "decrease number of secondary coils" condone "increase number of primary coils"	2

Total for Question 6 = 11 marks