Question number	Answer	Notes	Marks
6 (a) (i)	angle of incidence = 40 (°); angle of refraction = 23 (°);	allow 38-42 allow 21-25	2
(ii)	n = sin(i)/sin(r);	allow rearrangements reject n = i/r	1
(iii)	substitution of candidate's values into formula; evidence of sines of angles; evaluation;	allow ecf from (i) i.e 0.642 for sin(40), 0.390 for sin(23) reject 1.73913 or any value clearly angle of incidence divided by angle of refraction	3
	e.g. n = sin(40)/sin(23) n = 1.6(5)	NB - using extreme values from (i), n rounds the range 1.46 to 1.87	
(b) (i)	single ray emerges and extended to horizontal ray; ray bends away from normal by eye;		2

(ii)	idea that F moves away from the prism;	i.e. the crossing point is further away or moves out	3
	idea that red ray bends less than green at either interface;		
	idea that red ray bends less than green at both interfaces;	allow angle of refraction is smaller at second interface allow angle of refraction is larger at first interface allow angle of refraction is closer to angle of incidence/eq condone 'less refraction'	

Total for Question 6 = 11 marks