

Question number	Answer	Notes	Marks
7 (a)	<p>any five from MP1-MP7:</p> <p>apparatus:  MP1. method of creating thin beam of light;  MP2. protractor;</p> <p>method:  MP3. draw round the block;  MP4. shine light into the block at an angle to the normal;  MP5. mark incident and refracted rays;  MP6. measure angles from the normal;</p> <p>MP7. repeat for different angles of incidence;</p> <p>PLUS</p> <p>MP8. graph of <math>\sin(i)</math> and <math>\sin(r)</math> with <math>n</math> found from gradient</p>	<p>allow marking points from diagram</p> <p>e.g. laser, ray box etc.  ignore torch</p> <p>however expressed</p> <p>allow simple use of <math>n = \sin(i) / \sin(r)</math></p>	6
(b)	<p>optical fibres;  named prismatic use e.g. cats eye reflector, binoculars, periscope etc;</p>		2

Total for Question 7 = 8 marks