

Q1. (2019)

7.1	speed / velocity in the glass is lower	speed / velocity changes is insufficient	1	AO1 6.6.2.2	E
		allow the refractive index of glass is higher than that of air			
		allow glass has a higher optical density than air			
	so the edge of the wave(front) entering the glass slows down		1		
	but the part of the wave(front) in the air continues at the higher speed / velocity (causing a change in direction)		1		

Q2. (2019)

7.2	correct ray in the prism bent towards the normal		1	AO1 6.2.2.2	E
	second normal at 90° at the point the ray emerges		1		
	correct emergent ray bent away from the normal	this mark can be awarded without a normal line drawn	1		

Q3. (2019)

7.3	violet has the shortest wavelength (400 nm)		1	AO3 6.2.2.2	E
	violet light travels the slowest in water		1		
	violet light undergoes the greatest change in speed (and direction)		1		

Q4. (2023)

01.3	refraction		1	AO1 6.6.2.2	
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