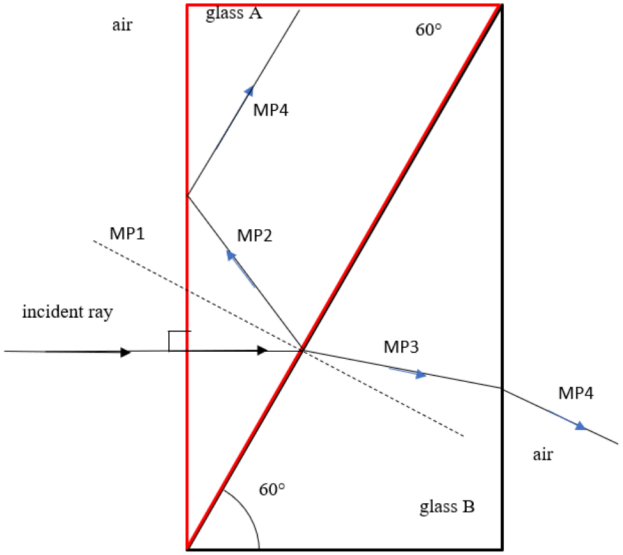
Question Number	Answer	Mark
16a	Transverse: vibrations/oscillations are perpendicular to the direction of (wave) travel (1) Longitudinal: vibrations/oscillations are parallel to the direction of (wave) travel (1)	**2**
16bi	The light is (incident on the boundary) along the normal **Or** The angle of incidence is 0° **Or** The light hits (prism A) at right angles (1)	**1**
16bii	Normal line correctly drawn at right angles to boundary (by eye) (1) Reflected ray in correct direction from boundary (by eye) (1) Refracted ray in correct direction from boundary (by eye) (1) Correct refraction at the right hand side of the glass block (by eye) **and** either TIR or correct direction refraction at the left hand side (by eye) (1)  	**4**
16biii	Use of $n_1 \sin \theta_1 = n_2 \sin \theta_2$ (1) with 30°, 1.40 and 1.55 substituted correctly (1) Angle of refraction = 27° (1) <u>Example of calculation</u> $n_1 \sin \theta_1 = n_2 \sin \theta_2$, so 1.40 (sin 30°) = 1.55 (sin r), r = 26.8°	**3**
16c	Light (emerging) is polarised (1) Only transverse waves can be polarised (1)	**2**
	Total for question 16	**12**