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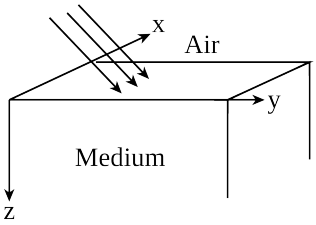
JEE MAIN WAVE OPTICS — BREWSTER'S LAW, POLARISATION BY SCATTERING AND REFLECTION — PYQS

Max. Marks: 12 **Questions:** 3

Section A (MCQ) — 3 questions

Q.1 An unpolarized light is incident on the plane interface of air-dielectric medium shown in figure. If the incident angle is equal to Brewster angle, identify the expression representing reflected wave.

[JEE Main 2026 (Online) 4th April Morning Shift]



(1) $(E_x\hat{i} + E_y\hat{j})\sin(kx - kz - \omega t)$

(2) $(E_x\hat{i} + E_z\hat{k})\sin(kx + ky - \omega t)$

(3) $(E_x\hat{j} + E_y\hat{k})\sin(ky + kz - \omega t)$

(4) $(E_x\hat{i} + E_y\hat{j} + E_z\hat{k})\sin(kx + ky - kz - \omega t)$

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Q.2 An unpolarised light is incident at an interface of two dielectric media having refractive indices of 2 (incident medium) and $2\sqrt{3}$ (refracted medium) respectively. To satisfy the condition that reflected and refracted rays are perpendicular to each other, the angle of incidence is _____

[JEE Main 2026 (Online) 24th January Morning Shift]

(1) 45° (2) 60° (3) 10° (4) 30°

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Q.3 When an unpolarized light falls at a particular angle on a glass plate (placed in air), it is observed that the reflected beam is linearly polarized. The angle of refracted beam with respect to the normal is _____. ($\tan^{-1}(1.52) = 57.7°$, refractive indices of air and glass are 1.00 and 1.52, respectively.)

[JEE Main 2026 (Online) 23rd January Evening Shift]

(1) 36.3° (2) 39.6° (3) 42.6° (4) 32.3°

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ANSWER KEY

Ques.	1	2	3								
Ans.	**1**	**2**	**4**								