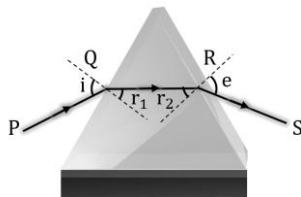
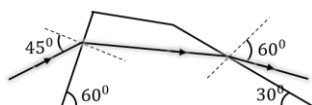


- Q.1** The angle of the prism is 30° . The rays incident at 60° on one refracting surface suffers a total deviation of 30° . Find the angle of emergence.
 (A) 0° (B) 30° (C) 60° (D) 90°

- Q.2** An equilateral prism is placed on a horizontal surface. A ray PQ is incident on it. For minimum deviation

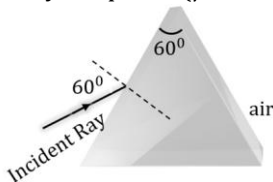


- (A) PQ is horizontal (B) QR is horizontal (C) RS is horizontal (D) QR is vertical
- Q.3** A ray is passing through a broken prism as shown. Find the total deviation suffered by the light ray.

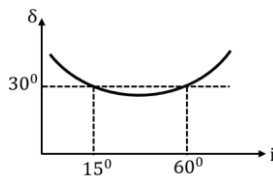


- (A) 105° (B) 30° (C) 60° (D) 15°
- Q.4** The angle of incidence for a ray of light at a refracting surface of a prism is 45° . The angle of prism is 60° . If the ray suffers minimum deviation through the prism, the angle of minimum deviation and refractive index of the material of the prism, respectively are [Assume the surrounding medium to be air]
- (A) $45^\circ; \sqrt{2}$ (B) $30^\circ; \frac{1}{\sqrt{2}}$ (C) $45^\circ; \frac{1}{\sqrt{2}}$ (D) $30^\circ; \sqrt{2}$

- Q.5** Find the angle of deviation produced by the prism ($\mu = \sqrt{3}$) for the situation shown in the figure



- (A) 60° clockwise (B) 75° clockwise (C) 30° clockwise (D) 60° anticlockwise
- Q.6** Figure shows the graph of angle of deviation δ versus angle of incidence i for a light ray striking a prism. The prism angle is



- (A) 30° (B) 45° (C) 60° (D) 75°
- Q.7** For the angle of minimum deviation of a prism to be equal to its refracting angle, the prism must be made of a material whose refractive index :
- (A) lies between $\sqrt{2}$ and 1 (B) lies between 2 and $\sqrt{2}$
 (C) is less than 1 (D) is greater than 2

- Q.8** The minimum deviation produced by a hollow prism filled with a certain liquid to be 30° . If the refracting angle is 60° , then refractive index of the liquid is (Neglect the refraction at the glass surface)

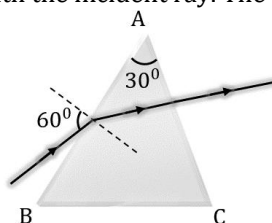
(A) $\sqrt{2}$

(B) $\sqrt{3}$

(C) $\sqrt{\frac{3}{2}}$

(D) $\frac{3}{2}$

- Q.9** A ray of light is incident at an angle of 60° on one face of a prism of angle 30° . The ray emerging out of the prism makes an angle of 30° with the incident ray. The emergent ray is :



- (A) Normal to the face through which it emerges
 (B) Parallel to the face through which it emerges
 (C) Inclined at 60° to the face through which it emerges
 (D) Inclined at 30° , to the face through which it emerges
- Q.10** A glass prism with a refracting angle of 60° has a refractive index 1.52 for red light. A parallel beam of white light is incident on one face of the prism at an angle of incidence, which gives minimum deviation for red light. Find the angle of minimum deviation for red light. [Given: $\sin(50^\circ) = 0.760$]
- (A) 30° (B) 40° (C) 50° (D) 60°

ANSWER KEY

Q.	1	2	3	4	5	6	7	8	9	10
Sol.	(A)	(B)	(D)	(D)	(A)	(B)	(B)	(A)	(A)	(B)