

PYQSide

NEET RAY OPTICS AND OPTICAL INSTRUMENTS — REFRACTION, SNELL'S LAW, APPARENT DEPTH — PYQS

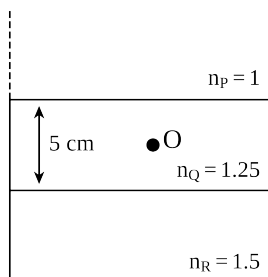
Max. Marks: 28

Questions: 7

Section A (MCQ)

- Q.1** Consider three media P, Q and R with refractive indices 1, 1.25, and 1.5 respectively. The medium Q having a thickness of 5 cm is placed between extended media P and R as shown in the figure. An object O is placed at the centre of medium Q. If viewed from medium P near the normal direction, the apparent depth of O is h_1 . For similar observation from medium R, the apparent depth is h_2 . The value of $|h_1 - h_2|$, in cm, is:

[RE-NEET (UG) 2026]



- (1) 3 (2) 0 (3) 1 (4) 2

Scan or tap for the full solution



- Q.2** An air bubble in a glass slab with refractive index 1.5 (near normal incidence) is 5 cm deep when viewed from one surface and 3 cm deep when viewed from the opposite face. The thickness (in cm) of the slab is [NEET 2016 (Phase 2)]
- (1) 8 (2) 10 (3) 12 (4) 16

Scan or tap for the full solution



- Q.3** The frequency of a light wave in a material is 2×10^{14} Hz and wavelength is $5000 \text{ \AA}$. The refractive index of material will be [AIPMT 2007]
- (1) 1.50 (2) 3.00 (3) 1.33 (4) 1.40

Scan or tap for the full solution



- Q.4** A microscope is focussed on a mark on a piece of paper and then a slab of glass of thickness 3 cm and refractive index 1.5 is placed over the mark. How should the microscope be moved to get the mark in focus again? [AIPMT 2006]

- (1) 2 cm upward (2) 1 cm upward
(3) 4.5 cm downward (4) 1 cm downward

Scan or tap for the full solution



- Q.5** A beam of light composed of red and green rays is incident obliquely at a point on the face of a rectangular glass slab. When coming out on the opposite parallel face, the red and green rays emerge from [AIPMT 2004]
- (1) two points propagating in two different non-parallel directions
(2) two points propagating in two different parallel directions
(3) one point propagating in two different directions
(4) one point propagating in the same directions

Scan or tap for the full solution



- Q.6** A ray of light travelling in air has wavelength λ , frequency n , velocity v and intensity I . If this ray enters into water then these parameters are λ' , n' , v' and I' respectively. Which relation is correct from following? [AIPMT 2001]
- (1) $\lambda = \lambda'$ (2) $n = n'$ (3) $v = v'$ (4) $I = I'$

Scan or tap for the full solution



- Q.7** A bubble in glass slab ($\mu = 1.5$) when viewed from one side appears at 5 cm and 2 cm from other side, then thickness of slab is [AIPMT 2000]
- (1) 3.75 cm (2) 3 cm (3) 10.5 cm (4) 2.5 cm.

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7				
Ans.	3	3	2	2	2	2	3				