

PYQSide

NEET WAVE OPTICS — RESOLVING POWER OF OPTICAL INSTRUMENTS (OLD SYLLABUS) — PYQS

Max. Marks: 20

Questions: 5

Section A (MCQ)

- Q.1** Assume that light of wavelength 600 nm is coming from a star. The limit of resolution of telescope whose objective has a diameter of 2 m is :

[NEET (UG) 2020]

- (1) 1.83×10^{-7} rad (2) 7.32×10^{-7} rad
(3) 6.00×10^{-7} rad (4) 3.66×10^{-7} rad

Scan or tap for the full solution



- Q.2** The ratio of resolving powers of an optical microscope for two wavelengths $\lambda_1 = 4000 \text{ \AA}$ and $\lambda_2 = 6000 \text{ \AA}$ is

[NEET 2017]

- (1) 9 : 4 (2) 3 : 2 (3) 16 : 81 (4) 8 : 27

Scan or tap for the full solution



- Q.3** The angular resolution of a 10 cm diameter telescope at a wavelength of $5000 \text{ \AA}$ is of the order of

[AIPMT 2005]

- (1) 10^6 rad (2) 10^{-2} rad (3) 10^{-4} rad (4) 10^{-6} rad.

Scan or tap for the full solution



- Q.4** A telescope has an objective lens of 10 cm diameter and is situated at a distance of one kilometer from two objects. The minimum distance between these two objects, which can be resolved by the telescope, when the mean wavelength of light is $5000 \text{ \AA}$, is of the order of

[AIPMT 2004]

- (1) 0.5 m (2) 5 m (3) 5 mm (4) 5 cm

Scan or tap for the full solution



- Q.5** Diameter of human eye lens is 2 mm. What will be the minimum distance between two points to resolve them, which are situated at a distance of 50 metre from the eye? The wavelength of light is $5000 \text{ \AA}$.

[AIPMT 2002]

- (1) 2.32 m (2) 4.28 mm
(3) 1.25 m (4) 12.48 cm

Scan or tap for the full solution



ANSWER KEY

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