Physics MCQs for NET, IAS, State-SET (KSET, WBSET, MPSET, etc.), GATE, CUET, Olympiads etc. Part 8

Get unlimited access to the best preparation resource for competitive exams : get questions, notes, tests, video lectures and more [https://www.doorsteptutor.com]- for all subjects of your exam.

Question:

If young's double slit experiment is performed in water.

- A. The fringe width will decreases
- B. The fringe width will increase
- C. The fringe width will remain unchanged
- D. There will be no fringe

Question:

The first diffraction minimum due to single slit diffraction is θ, for a light of wave length 5000Å. If the width of the slit is $1 \times 10^{-4} cm.$ then the value of θ is

- A. 300
- B. 450
- C. 600
- D. 150

Question:

Non-coherent sources emit light beam of intensities $I \text{and} 4I.$ the maximum and minimum intensities in the resulting beam are

- A. $9I \text{and} 3I$
- B. $9I \text{and} 5I$
- C. $5I \text{and} I$
- D. $5I \text{and} 3I$

Question:

Light propagates $2\,cm$ distance in glass of refractive index 1.5 in time t0.In the same time t0, light propagates a distance of $2.25\,cm$ in a medium. The refractive index of the medium is

- A. $\frac{4}{3}$
- B. $\frac{3}{2}$

C. $\frac{8}{3}$

D. None of these

Question:

Two wave fronts are emitted from coherent sources of path difference between them is 2.1 micron. Face difference between the wave fronts at that point is 7.692π Wave length of light emitted by source will be

A. $5386\overset{\circ}{A}$

B. $5400\overset{\circ}{A}$

C. $5460\overset{\circ}{A}$

D. $5892\overset{\circ}{A}$

Question:

A spherical air bubble in water will act as

A. Convex lens

B. Concave lens

C. Glass plate

D. Plano convex lens

Question:

A concave lens can be used as a simple magnifier if the object lies

A. Beyond f

B. Within the focal length

C. Between f and 2f

D. At 2f

Question:

For an equilateral prism the angle of minimum deviation is 300. Then the refractive index of the material of the prism is

A. $\frac{1}{2}$

B.

C. 4

D. 22