ETERNAL CAREER CLASSES

SUBJECT : BIOLOGY

1. Light travel through a glass plate of thickness t and refractive index 'n'. If c is the velocity of light in vacuum, then the time taken by light to travel the thickness of the plate will be
   (a) *nt/c*   (b) *t/nc*
   (c) *tc/n*   (d) *c/nt*

2. Wave nature of light follows because
   (a) Light rays travel in a straight line
   (b) Light exhibits the phenomena of reflection and refraction
   (c) Light exhibits the phenomenon of interference
   (d) Light causes the phenomenon of photoelectric effect

3. Wavefront of a wave has direction with wave motion
   (a) paraller   (b) Perpendicular
   (c) Opposite   (d) At an angle of θ

4. Which one of the following phenomena is not explained by Huygens construction of wavefront?
   (a) Refraction   (b) Reflection
   (c) Diffraction   (d) Origin of spectra

5. The wave theory of light was given by
   (a) Maxwell   (b) Planck
   (c) Huygens   (d) Young

6. The ratio of intensities of two waves are given by 4 : 1 the ratio of the amplitudes of the two waves is
   (a) 2 : 1   (b) 1 : 2
   (c) 4 : 1   (d) 1 : 4

7. Ratio of amplitude of interfering waves is 3 : 4. Now ratio of their intensities will be
   (a) 16 : 9   (b) 49 : 1
   (c) 9 : 16   (d) None of these

8. In a Young's double slit experiment, the central point on the screen is
   (a) Bright
   (b) Dark
   (c) First bright and then dark
   (d) First dark and then bright

9. A Young's double slit experiment uses a monochromatic source. The shape of the interference fringes formed on a screen is
   (a) Straight line   (b) Parabola
   (c) Hyperbola   (d) Circle

10. If I0 is the intensity of the principal maximum in the single slit diffraction pattern, then what will be its intensity when the slit width is doubled?
    (a) I_0 (b) $\dfrac{I_0}{2}$
    (c) $2 I_0$ (d) $4 I_0$

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