Assignment 11

The due date for submitting this assignment has passed. Due on 2018-10-17, 23:59 IST.
As per our records you have not submitted this assignment.

1) Optically anisotropic materials differ from optically isotropic materials by

- (a) having high critical angles
- (b) having low critical angles
- (c) being able to polarize light
- (d) none of the above

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

- (c) being able to polarize light

2) In experimental stress analysis technique under which category photo elasticity lies in?

- (a) Point by point technique
- (b) Full field technique
- (c) Special technique
- (d) None of these

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

- (b) Full field technique

3) Which of the following statements are true?

1. Temporary double refraction criterion persists in a material when the loads are maintained.
2. Some transparent noncrystalline material that are optically isotropic in stress free state behaves like an optically anisotropic material when subjected to load.

- (a) Only statement 1 is correct
- (b) Only statement 1 is correct
- (c) Both of them are correct

No, the answer is incorrect.

**Score: 0**

**Accepted Answers:**

- (b) Only statement 1 is correct
4) What is the correct relationship between wave number (ξ) and frequency or number of oscillation per second (f)?

(a) ξ = \frac{2\pi}{λ}
(b) ξ = \frac{1}{c}
(c) ξ = \frac{f}{c}
(d) ξ = 2\pi f

No, the answer is incorrect.
Score: 0
Accepted Answers: d

5) what is the relationship between incident light intensity (I_i), reflected light intensity (I_r) and reflection coefficient (R)?

(a) I_i = RI_r
(b) I_r = RI_i
(c) \ln I_i = R \ln I_r
(d) \ln I_r = R \ln I_i

No, the answer is incorrect.
Score: 0
Accepted Answers: b

6) Consider two simple wave fronts \( E_1 = a_1 \cos(\omega_1 t - \phi_1) \) and \( E_2 = a_2 \cos(\omega_2 t - \phi_2) \) in mutually orthogonal planes. When these two wave fronts are superimposed a new wave front \( E \) is formed. If \( a_1 = a_2 = a \) and \( \delta = \frac{1}{2}\delta_0 (\phi_2 - \phi_1) = (2n + 1)\pi/4 \), what is the shape trace of the tip of the polarised light?

(a) An ellipse
(b) A straight line
(c) A circle
(d) A hyperbola
Consider two simple wave fronts \( E_1 = a_1 \cos(\omega_1 t - \phi_1) \) and \( E_2 = a_2 \cos(\omega_2 t - \phi_2) \) in the same plane. When these two wave fronts are superimposed a new wave front \( E \) is formed. Which of the following is correct?

(a) \( E = \sqrt{E_1^2 + E_2^2} \)
(b) \( E = E_1 + E_2 \)
(c) \( E = E_1^2 + E_2^2 \)
(d) \( E = \frac{E_1^2}{E_2} \)

Consider two simple wave fronts \( E_1 = a_1 \cos(\omega_1 t - \phi_1) \) and \( E_2 = a_2 \cos(\omega_2 t - \phi_2) \) in two mutually orthogonal planes. When these two wave fronts are superimposed a new wave front \( E \) is formed. If \( a_1 = a_2 = a \) and \( \delta = \frac{\lambda}{2\pi}(\phi_2 - \phi_1) = n\lambda/2 \), what is the shape of the light polarisation at the tip of the polarised light?

(a) An ellipse
(b) A straight line
(c) A circle
(d) A hyperbola
9) Consider two simple wave fronts \( E_1 = a_1 \cos(\omega_1 t - \phi_1) \) and \( E_2 = a_2 \cos(\omega_2 t - \phi_2) \) in two mutually orthogonal planes. When these two wave fronts are superimposed a new wavefront \( E \) is formed. Which of the following is correct?

(a) \( E = \sqrt{E_1^2 + E_2^2} \)
(b) \( E = E_1 + E_2 \)
(c) \( E = E_1^2 + E_2^2 \)
(d) \( E = \frac{E_1}{E_2} \)

No, the answer is incorrect.
Score: 0
Accepted Answers: 

10) A polariscope tests for

(a) Diffraction
(b) Refractive index
(c) Dispersion
(d) none of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:

(d) none of the above