

Dept. of Physics
DEGLOOR COLLEGE, DEGLOOR
MCQ for Practice

B.Sc. S.Y.

Unit: Polarization

1. Natural light is
 - a) Plane polarized
 - b) Circularly polarized
 - c) Elliptically polarized
 - d) Unpolarized
2. Restriction of light into a single plane only is
 - a) Polarization
 - b) Diffraction
 - c) Interference
 - d) Refraction
3. Transverse nature of light can be proved by
 - a) Interference
 - b) Diffraction
 - c) Polarization
 - d) None of these
4. Which of the following is/are types of polarization
 - a) plane polarized
 - b) Elliptical polarization
 - c) Circular polarization
 - d) All above are correct
5. Polarization can be produced by
 - a) Reflection
 - b) Refraction
 - c) Double refraction
 - d) All above are correct
6. E. L. Malus discovered polarization of light by
 - a) Reflection
 - b) Refraction
 - c) Double refraction
 - d) All above are correct
7. On bright sunny days glare caused by sunlight on roadway is effect of
 - a) Interference
 - b) Diffraction
 - c) Polarization
 - d) None of these
8. According to Malus the extent of polarization occurs depends on
 - a) Angle at which light incident on surface
 - b) The material
 - c) Both a and b are correct
 - d) Neither a nor b are correct
9. Electric field vector E of unpolarized light wave can be resolved into

- a) *s*- components only b) *p*- components only
c) Both *s* and *p* components d) Neither *s* nor *p* components
10. In case of Completely unpolarized light the two components are of
a) Equal in magnitude b) Not equal in magnitude
c) Zero magnitude d) None of these
11. At polarizing angle, reflected beam contains
a) Only *p*- components b) only *s*- components
c) Both *s* and *p* components d) Neither *s* nor *p* components
12. Polarizing angle is also called as
a) Malus angle b) Snell's angle
c) Brewster's angle d) Huygen's angle
13. Perpendicular components of *E* vector are called
a) *s*- components b) *p*- components
c) Both *s* and *p* components d) Neither *s* nor *p* components
14. Parallel components of *E* vector are called
a) *s*- components b) *p*- components
c) Both *s* and *p* components d) Neither *s* nor *p* components
15. According to Brewster, polarizing angle depends upon
a) Material b) Refractive Index of medium
c) Both *a* and *b* c) Neither *a* nor *b*
16. According to Brewster, tangent of Brewster angle is equal to
a) Square of Refractive Index of medium
b) Square root of Refractive Index of medium
c) Cube of Refractive index of medium
d) Refractive index of medium
17. $\mu = \tan\theta_B$ Is known as ..
a) Malus law b) Brewster law
c) Huygen law d) Nicol law
18. Light reflected from any angle other than Brewster angle is
a) Partially Polarized b) Completely polarized

- c) Totally polarized d) Unpolarized
19. Intensity of polarized light through polarizer is directly proportional to
 a) Square of cosine of angle between plane of polarization and transmission axis
 b) Square root of cosine of angle between plane of polarization and transmission axis
 c) Cosine of angle between plane of polarization and transmission axis
 d) Cube of cosine of angle between plane of polarization and transmission axis
20. e-ray and o-ray are
 a) circularly polarized b) elliptically polarized
 c) Linearly polarized d) None of these
21. Which of the following is/are uniaxial crystals
 a) Calcite b) Tourmaline
 c) Quartz d) All of these
22. Which of the following is/are biaxial crystals
 a) Topaz b) Tourmaline
 c) Quartz d) All of these
23. In double refraction along optic axis the speed of ..
 a) o-ray is greater than e-ray b) o-ray is less than e-ray
 c) o-rays and e- rays are same d) None of these
24. Nicol prism is
 a) Interference device b) Polarizing device
 c) Diffracting device d) None of these
25. In Nicol prism, the ends of rhombohedron are ground until makes an angle of Instead of 71° with longitudinal edge
 a) 68° b) 65°
 c) 63° d) None
26. In Nicol prism, two parts of crystal are cemented together with
 a) Canada Balsam b) Topaz
 c) Quartz d) mica
27. Refractive Index of Canada Balsam is
 a) 1.66 b) 1.486
 c) 1.55 d) 1.33

37. Which of the following is /are optically active substances?
- a) Quartz
b) Mica
c) Topaz
d) All of these
38. Which of the following is /are optically active substances?
- a) cinnabar
b) Sugar solution
c) Tartaric acid
d) All of these
39. In solution the amount of rotation θ is given by $\theta = s c l$ where s is
- a) Concentration of solution
b) length in decimeters
c) Rotational constant
d) Specific rotation
40. Polarimeter is an instrument used for determination of
- a) Interference of light
b) Diffraction of light
c) Resolving power
d) Optical rotation

