Wave Optics Overview

Here are 30 fill-in-the-blank statements on **Polarisation**

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1. Polarisation is a characteristic of _____ waves.
2. A wave where displacement is confined to a single plane is called a _____ wave.
3. The _____ angle is the angle of incidence where reflected light is fully polarised.
4. Light from the _____ is unpolarised.
5. The concept of polarisation shows that light is a _____ wave.
6. When viewed through a rotating polaroid, light from the sky shows variations in _____.
7. Brewster's law states that $\tan i_B = \mu$, where i_B is the _____ angle.
8. Scattered light from the sky is polarised due to interaction with _____ in the atmosphere.
9. Polaroids are used in sunglasses to reduce glare by blocking _____ light.
10. At Brewster's angle, the reflected ray is _____ to the refracted ray.
11. A _____ polarised wave has vibrations confined to one direction perpendicular to the direction of propagation.
12. Polaroids have molecules aligned in a specific direction, called the _____ axis.
13. In Malus' law, transmitted intensity $I = I_0 \cos^2 \theta$, where θ is the angle between the _____ axes.
14. Unpolarised light has electric vectors in _____ directions perpendicular to the direction of travel.
15. Light is polarised when it passes through a polaroid, reducing its _____ by half.
16. A light wave's _____ component is absorbed when it passes through a polaroid.
17. Only the component of the electric vector _____ to the polaroid axis passes through.
18. In Malus' law, I_0 represents the _____ intensity after passing through a single polaroid.
19. Light can also be polarised by _____ at a particular angle.
20. _____ observed that scattered light from the atmosphere is polarised.
21. Polarisation through reflection occurs when the electric field is _____ to the plane of incidence.
22. The angle where reflection results in full polarisation is called _____ angle.
23. When two polaroids are crossed at 90°, no _____ is transmitted.
24. Light reflecting from surfaces like water and glass is _____ polarised.
25. An analyser is used to test if light is _____.
26. Polarisation by _____ is the alignment of light waves in one plane by passing them through a polaroid.
27. The intensity of transmitted light through two polaroids varies with the _____ between their axes.
28. C.V. Raman received a Nobel Prize for his work on light _____.
29. In transverse waves like light, oscillations are _____ to the direction of propagation.
30. Light from a point source becomes partially polarised upon _____.

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1. **Transverse**
2. **Plane-polarised**
3. **Brewster**
4. **Sun**
5. **Transverse**
6. **Intensity**
7. **Brewster**
8. **Molecules**
9. **Polarised**
10. **Perpendicular**
11. **Linearly**
12. **Pass**
13. **Pass**
14. **All**
15. **Intensity**
16. **Parallel**
17. **Parallel**
18. **Initial**
19. **Reflection**
20. **Rayleigh**
21. **Perpendicular**
22. **Brewster**
23. **Light**
24. **Partially**
25. **Polarised**
26. **Selective absorption**
27. **Angle**
28. **Scattering**
29. **Perpendicular**
30. **Scattering**