

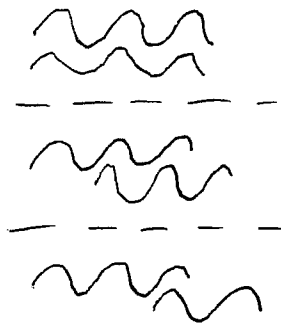
REVIEW for DUAL NATURE of LIGHT

Wave Nature

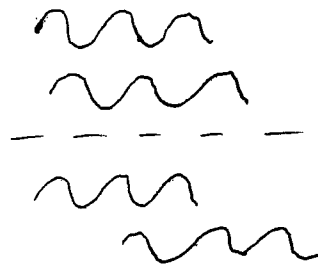
- 1) Know constructive and destructive interference and phase relationships possible for each.

Interference & Phase of Waves

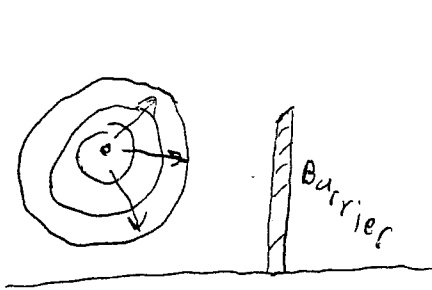
Constructive



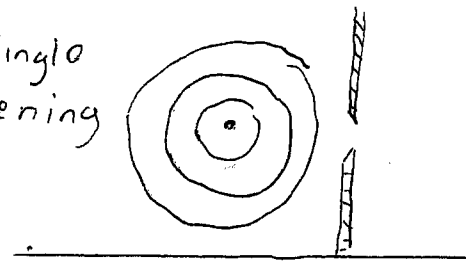
Destructive



- 2) Know diffraction is a wave quality

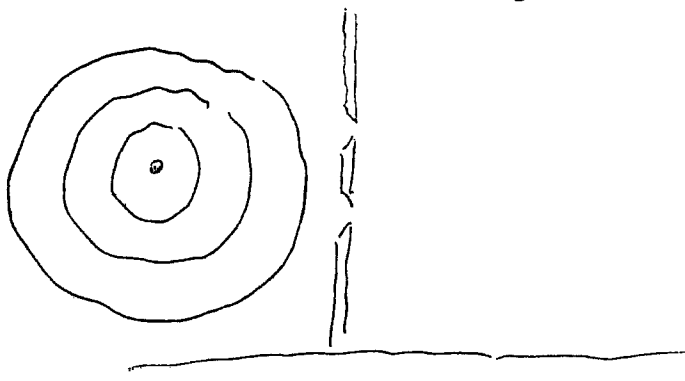


Single Opening

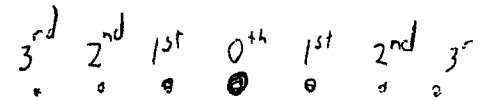


- 3) Know double opening diffraction & interference for wave fronts, If Light does this what pattern is produced on the screen?

Double opening



Double opening with light



Particle Nature -

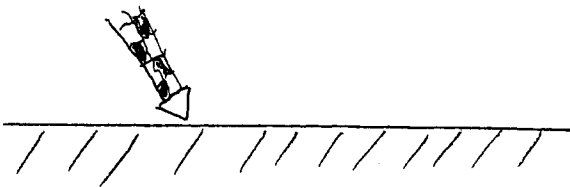
1) Know particles of light are called photons or quanta. Who first proposed this idea. Compare and contrast Intensity (brightness) of a light beam and frequency (wavelength or color) From the two points of view or models of light (Wave Model vs. Particle Model).

2) What is the equation for the energy of a Photon of light. Be able to convert from joules of energy to electron volts, and vice versa.

3) Describe the Photoelectric Effect experiment and its importance.

Photon = Color = freq. or wavelength

Brightness = # of photons



4) Know conservation principles applied in Photon Electron collisions.