

# Camera Exposure:-

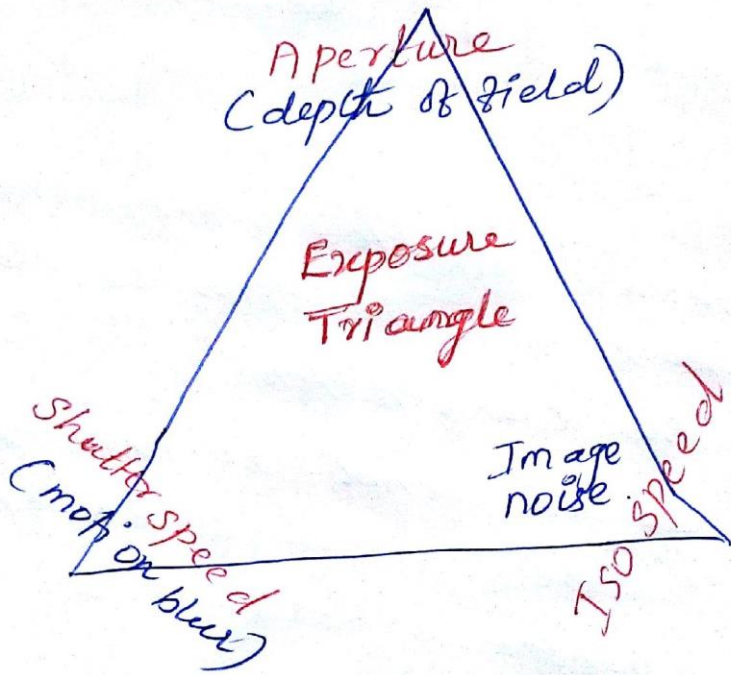
- A photograph's exposure determines how light or dark an image will appear when it's been captured by camera.

- 3 camera settings that controls the exposure,

\* Aperture [ lens Controls the amount of light reaching the light sensor ]

\* Shutter Speed [ shutter opens & closes to let the right amount of light fall on the light sensor & get a correctly exposed image ]

\* ISO (or) film Speed  
Controls the sensitivity of the camera sensors.



## Aperture:-

- Controls the area over which light can enter camera.

## Shutter speed:-

- Controls the duration of the exposure







## ISO speed:-

- Controls the sensitivity of camera's sensor to a given amount of light.

## Aperture setting:

- A camera's aperture setting controls the area over which light can pass through your camera lens.

- It is specified in terms of an f-stop value, which can at times be counterintuitive, because the area of the opening increases as the f-stop decreases.

					
		8x	4x	2x	1x
Relative light: 128x	32x	8x	4x	2x	1x
Shutter speed: 1/8 sec	1/2 sec	2secs	4secs	8secs	16secs

## Shutter speed:

- A camera's shutter determines when the camera sensor will be open or closed to incoming light from the camera lens.

- "Shutter speed" and "exposure time" refer to the same concept, where a faster shutter speed means a shorter exposure time.

Shutter speed  
1 - 30+ seconds

outcome  
⇒ specialty night & low-light photos on a tripod

$\frac{1}{2}$  to  $\frac{1}{30}$  second

⇒ to add motion blur to background

$\frac{1}{50}$  to  $\frac{1}{100}$  second

⇒ typical hand held photos

$\frac{1}{1000}$  to  $\frac{1}{4000}$  second

⇒ to freeze extremely fast, up close subject motion

- Shutter speed's influence on exposure is perhaps the simplest of the three camera settings; it correlates exactly 1:1 with the amount of light entering the camera. (19)

### ISO speed:-

- it determines how sensitive the camera is to incoming light.
- similar to shutter speed, it also correlates 1:1 with how much the exposure increases/decreases.
- Lower ISO speed is almost always desirable
- Higher ISO speeds dramatically increase the image noise.
- Hence, ISO speed is usually only increased from its minimum value if the desired aperture and shutter speed aren't otherwise obtainable.
- Common ISO speeds include 100, 200, 400 and 800.
- Although different speed is there, ISO speed in the range of 50-200 generally produces acceptably low image noise, digital SLR camera, a range of 50-800 is acceptable.