

# **Stress, strain, Elasticity and Plasticity**

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# Stress, strain, Elasticity and Plasticity

## Lecture – 1: Stress transformation and Mohr's circle for stresses

### 1.Quiz :

1. What is the difference between plane stress and plane strain?
2. A perfectly plastic material is yielding under the stress state  $\sigma_1, \sigma_2, \sigma_3$  where  $\sigma_1 > \sigma_2 > \sigma_3$ . Explain what happens if  $\sigma_1$  is increased.
3. What is the dilatation of a material with a Poisson's ratio of 0.5?
4. Is it possible to have a material with Poisson's ratio more than 0.5? Explain.