

UNIT-I

S. No.	Questions	BTL	CO	PO
Part–A(Short Answer Questions)				
1	Define stress and strain.	L1	CO1	1
2	State St. Venant's Principle.	L1	CO1	1
3	What is Hooke's Law?	L2	CO1	2
4	Define elasticity and plasticity.	L1	CO1	1
5	What is working stress?	L2	CO1	2
6	Define factor of safety.	L1	CO1	1
7	What is Poisson's ratio?	L1	CO1	1
8	Define lateral strain and volumetric strain.	L2	CO1	2
9	What is pure shear?	L2	CO1	2
10	What are complementary shear stresses?	L2	CO1	2
11	Define Young's modulus.	L1	CO1	1
12	Define shear modulus and bulk modulus.	L2	CO1	2
13	What is resilience?	L1	CO1	1
14	Define strain energy.	L2	CO1	2
15	Differentiate between gradual and sudden loading.	L2	CO1	2
Part– B(Long Answer Questions)				
1	Explain the stress-strain diagram for mild steel with neat sketch.	L2	CO1	2
2	Derive the relationship between Young's modulus, Bulk modulus and Poisson's ratio.	L4	CO1	2
3	Derive the relationship between Young's modulus and Shear modulus.	L3	CO1	2
4	Solve problems on bars of varying sections.	L3	CO1	2
5	Analyze composite bars subjected to axial loading.	L4	CO1	3
6	Derive expressions for temperature stresses in bars.	L4	CO1	3
7	Explain strain energy and resilience.	L4	CO1	2

Blooms Taxonomy Level (BT) (L1–Remembering; L2–Understanding; L3–Applying; L4– Analyzing; L5–Evaluating; L6–Creating)