

UNIT-V

S. No.	Questions	BTL	CO	PO
Part–A(Short Answer Questions)				
1	Define thin cylinder.	L1	CO1	1
2	Define hoop stress.	L1	CO1	1
3	Define longitudinal stress.	L2	CO1	2
4	What is circumferential strain?	L1	CO1	1
5	What is volumetric strain?	L2	CO1	2
6	State the assumptions of thin cylinder theory.	L1	CO1	1
7	Define thin spherical shell.	L1	CO1	1
8	Differentiate between thin cylinder and thin spherical shell.	L2	CO1	2
9	Define thick cylinder.	L2	CO1	2
10	State Lamé's assumptions.	L2	CO1	2
11	State Lamé's equations.	L1	CO1	1
12	What is a compound cylinder?	L2	CO1	2
13	What is shrink fitting?	L1	CO1	1
14	Why is radial stress neglected in thin cylinders?	L2	CO1	2
15	State the condition for a thin spherical shell.	L2	CO1	2
Part– B(Long Answer Questions)				
1	Derive the expression for hoop stress in thin cylinders.	L4	CO3	3
2	Derive the expression for longitudinal stress in thin cylinders.	L4	CO3	3
3	Determine hoop and longitudinal strains in thin cylinders.	L4	CO3	3
4	Derive expressions for change in diameter and length.	L3	CO3	2
5	Derive Lamé's equations for thick cylinders.	L4	CO3	3
6	Explain radial and hoop stress distribution in thick cylinders.	L4	CO3	3
7	Design a thick cylinder using Lamé's theory.	L4	CO3	3
8	Explain compound cylinders with neat sketch.	L3	CO3	2
9	Determine shrinkage pressure and interference in compound cylinders.	L4	CO3	3

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