

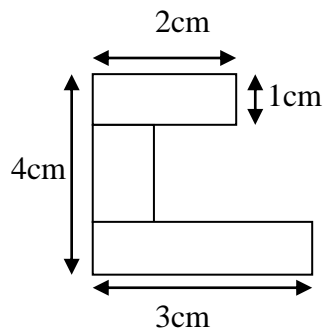
Semester- I

Branch:ME

QUESTION BANK

Subject with Code: Advance Mechanics of Solids, ME-504

- Q 1. What are the assumptions made in the theory of thin cylinders?
- Q 2. Define product of inertia.
- Q 3. State Maxwell's theorem
- Q 4. Define shear centre.
- Q 5. Define resilience.
- Q 6. Define torsional rigidity.
- Q 7. Define Hooke's Law.
- Q 8. What are the assumptions made in the theory of unsymmetrical bending?
- Q 9. What are the functions of spokes in rim.
- Q 10. Define principal moments of inertia.
- Q 11. Explain Castigliano Theorem with example.
- Q 12. Explain various theory of failure for Ductile materials and Brittle materials.
- Q 13. Obtain an expression for the stresses in a thin spherical vessel.
- Q 14. Determine the shear centre of the unsymmetrical section as shown



- Q 15. Explain Lamé's theory of thick pressure vessels.
- Q 16. Obtain an expression for torsion in thin walled tube.

- Q 17. Obtain an expression thermal stress in thin circular disc.
- Q 18. Explain Energy method for buckling problem with example.