

23CE503: STRUCTURAL ENGINEERING -I

UNIT-V

S.No	Questions	BTL	CO	PO
Part-A(Short Answer Questions)				
1	Define footing.	L1	C05	PO1
2	What are types of footings?	L1	C05	PO1
3	Define isolated footing.	L1	C05	PO1
4	Define combined footing.	L2	C05	PO1
5	What is safe bearing capacity?	L2	C05	PO1
6	Define punching shear.	L2	C05	PO1
7	What is bending moment in footing?	L2	C05	PO1
8	Define eccentric loading.	L2	C05	PO1
9	What is reinforcement in footing?	L1	C05	PO1
Part-B(Long Answer Questions)				
1	Design a square footing of uniform thickness for a column (500mm × 500mm) carrying 500kN load. SBC = 125kN/m ² . Use M20 and Fe415. Check for one-way and two-way shear.	L5	C05	PO3
2	Design a reinforced concrete footing of uniform thickness for a column (500mm × 500mm) carrying 1500kN load. SBC = 220kN/m ² . Use M25 and Fe415.	L5	C05	PO3
3	Design a footing of uniform thickness for a column (250mm × 400mm) carrying 1200kN load. SBC = 180kN/m ² . Use M20 and Fe415.	L5	C05	PO3

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