

23CE503: STRUCTURAL ENGINEERING – I (RCC)
DESIGN OF COLUMNS
UNIT IV

Part A: Objective Questions (MCQs)

1. Short column fails by:

- A) Buckling
- B) Crushing
- C) Shear
- D) Torsion

Answer: B

2. Slenderness ratio defines:

- A) Strength
- B) Stability
- C) Load
- D) None

Answer: B

3. Minimum eccentricity is:

- A) 0
- B) $L/500$
- C) $D/30$
- D) Both B and C

Answer: D

4. Columns are designed for:

- A) Axial load
- B) Bending
- C) Both
- D) Shear

Answer: C

5. Long column fails by:

- A) Crushing
- B) Buckling
- C) Yielding
- D) None

Answer: B

6. Interaction diagrams are used for:

- A) Beams
- B) Slabs
- C) Columns
- D) Footings

Answer: C

7. Axial load capacity depends on:

- A) Area
- B) Strength
- C) Both
- D) None

Answer: C

8. Tie columns use:

- A) Helix
- B) Ties
- C) None
- D) Plates

Answer: B

9. Helical reinforcement improves:

- A) Strength
- B) Ductility
- C) Both
- D) None

Answer: C

10. Column is compression member when:

- A) Load axial
- B) Load eccentric
- C) Both
- D) None

Answer: C

Part B: Fill in the Blanks

1. Short column fails by _____. Answer: Crushing

2. Long column fails by _____. Answer: Buckling

3. Slenderness ratio = _____. Answer: L_e/D

4. Column carries _____ load. Answer: Axial

5. Minimum eccentricity avoids _____. Answer: Instability

6. Interaction diagrams relate _____ and moment. Answer: Load
7. Helical reinforcement improves _____. Answer: Ductility
8. Tie spacing controls _____. Answer: Buckling
9. Column design uses _____ charts. Answer: Interaction
10. Compression member resists _____. Answer: Compression