

UNIT-II: METHODS, SYSTEMS AND LOSSES OF PRESTRESS

1. Hoyer system is used in _____.

- A) Pretensioning
- B) Post-tensioning
- C) Composite beams
- D) RCC

Answer: A

2. Freyssinet system is a _____ system.

- A) Pretensioning
- B) Post-tensioning
- C) Composite
- D) RCC

Answer: B

3. Magnel-Blaton system uses _____ anchorage.

- A) Wedge
- B) Sandwich plate
- C) Screw
- D) Bolt

Answer: B

4. Gifford-Udall system employs _____ grips.

- A) Wedge
- B) Rivet
- C) Bolt
- D) Pin

Answer: A

5. Lee-McCall system belongs to _____.

- A) RCC
- B) Prestressing
- C) Composite
- D) Timber

Answer: B

6. Elastic shortening causes loss in _____ members.

- A) Steel
- B) Concrete
- C) Timber
- D) Masonry

Answer: B

7. Shrinkage loss occurs due to loss of _____.

- A) Cement
- B) Water
- C) Aggregate
- D) Sand

Answer: B

8. Creep occurs under _____ loading.

- A) Impact
- B) Sustained
- C) Dynamic
- D) Cyclic

Answer: B

9. Relaxation loss occurs in _____.

- A) Concrete
- B) Steel
- C) Mortar
- D) Aggregate

Answer: B

10. Anchorage slip occurs mainly in _____ systems.

- A) Pretensioning
- B) Post-tensioning
- C) RCC
- D) Composite

Answer: B

11. Friction loss occurs in _____ tendons.

- A) Straight
- B) Curved
- C) Short
- D) Vertical

Answer: B

12. Total prestress loss reduces effective _____.

- A) Width
- B) Prestress force
- C) Span
- D) Height

Answer: B

13. Creep strain increases with _____.

- A) Width
- B) Time
- C) Density
- D) Grade

Answer: B

14. Relaxation is reduction of stress at constant _____.

- A) Load
- B) Strain
- C) Weight
- D) Temperature

Answer: B

15. Friction losses depend on tendon _____.

- A) Shape
- B) Density
- C) Weight
- D) Grade

Answer: A

16. Elastic shortening loss occurs immediately after _____.

- A) Curing
- B) Prestressing
- C) Loading
- D) Grouting

Answer: B

17. Shrinkage loss is greater in _____ concrete.

- A) Young
- B) Old
- C) Dense
- D) Wet

Answer: A

18. Creep is a _____ dependent phenomenon.

- A) Load
- B) Time
- C) Temperature
- D) Shape

Answer: B

19. Prestress losses are expressed as _____.

- A) Percentage
- B) Area
- C) Volume
- D) Density

Answer: A

20. IS codes provide provisions for prestress _____.

- A) Gains
- B) Losses
- C) Density
- D) Volume

Answer: B

UNIT-III: FLEXURE AND SHEAR

1. A concentric tendon passes through the _____.

- A) Neutral axis
- B) Centroidal axis
- C) Top fiber
- D) Bottom fiber

Answer: B

2. Eccentric tendons create prestressing _____.

- A) Shear
- B) Moment
- C) Torque
- D) Thrust

Answer: B

3. Parabolic tendons are commonly used in _____.

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

Answer: B

4. Kern zone is free from _____ stress.

- A) Compression
- B) Tension
- C) Bearing
- D) Shear

Answer: B

5. Elastic design is based on _____ loads.

- A) Service
- B) Ultimate
- C) Collapse
- D) Impact

Answer: A

6. Cable profile should follow the _____ diagram.

- A) SFD
- B) BMD
- C) Axial force
- D) Torsion

Answer: B

7. Prestressing reduces _____ stresses.

- A) Bearing
- B) Tensile
- C) Thermal
- D) Shrinkage

Answer: B

8. Principal tensile stress is important in _____ design.

- A) Flexure
- B) Shear
- C) Compression
- D) Bearing

Answer: B

9. Inclined cables improve _____ resistance.

- A) Compression
- B) Shear
- C) Bearing
- D) Thermal

Answer: B

10. Bent-up tendons increase _____ strength.

- A) Shear
- B) Compression
- C) Bearing
- D) Thermal

Answer: A

11. Stress diagrams show stress _____.

- A) Distribution
- B) Density
- C) Weight
- D) Volume

Answer: A

12. I-sections are preferred for _____ spans.

- A) Short
- B) Long
- C) Temporary
- D) Small

Answer: B

13. Horizontal prestressing increases _____ resistance.

- A) Flexure
- B) Shear
- C) Bearing
- D) Torsion

Answer: B

14. Vertical prestressing improves _____ capacity.

- A) Shear
- B) Bearing
- C) Thermal
- D) Shrinkage

Answer: A

15. Principal compression acts perpendicular to principal _____.

- A) Load
- B) Tension
- C) Weight
- D) Density

Answer: B

16. Shear reinforcement is designed according to _____ provisions.

- A) IS Code
- B) ASTM
- C) IRC
- D) ACI only

Answer: A

17. Prestressing increases the cracking _____.

- A) Width
- B) Load
- C) Height
- D) Density

Answer: B

18. Kern distance depends on section _____.

- A) Shape
- B) Weight
- C) Color
- D) Density

Answer: A

19. Eccentric prestressing induces _____ stresses.

- A) Bending
- B) Thermal
- C) Shrinkage
- D) Bearing

Answer: A

20. Shear cracks develop due to principal _____ stress.

- A) Compressive
- B) Tensile
- C) Bearing
- D) Thermal

Answer: B