

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