

UNIT-I: INTRODUCTION TO PRESTRESSED CONCRETE

1. Prestressing is the process of introducing _____ stresses in concrete.

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

Answer: B

2. The father of modern prestressed concrete is _____.

- A) Hoyer
- B) Freyssinet
- C) Magnel
- D) Guyon

Answer: B

3. In pretensioning, steel is stressed _____ casting concrete.

- A) After
- B) During
- C) Before
- D) Without

Answer: C

4. In post-tensioning, tendons are stressed _____ concrete hardens.

- A) Before
- B) During
- C) After
- D) Without

Answer: C

5. Prestressing mainly improves the _____ strength of concrete members.

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

Answer: B

6. High tensile steel is used because of its high _____.

- A) Ductility
- B) Strength
- C) Density
- D) Weight

Answer: B

7. Prestressed concrete is economical for _____ spans.

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

Answer: C

8. One advantage of PSC is reduced _____.

- A) Durability
- B) Cracking
- C) Strength
- D) Stability

Answer: B

9. High-strength concrete is required to resist high _____ stresses.

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

Answer: C

10. Prestressing increases the _____ load capacity.

- A) Ultimate
- B) Dead
- C) Wind
- D) Thermal

Answer: A

11. The force used for prestressing is applied through _____.

- A) Bars
- B) Tendons

C) Stirrups

D) Anchors

Answer: B

12. Pretensioning is commonly adopted in _____ members.

A) Cast-in-situ

B) Precast

C) Composite

D) Timber

Answer: B

13. Prestressing reduces beam _____.

A) Deflection

B) Width

C) Height

D) Density

Answer: A

14. PSC requires _____ workmanship.

A) Poor

B) Ordinary

C) Skilled

D) Untrained

Answer: C

15. The stress induced before loading is called _____.

A) Working stress

B) Prestress

C) Ultimate stress

D) Shear stress

Answer: B

16. Prestressed concrete provides better _____ resistance.

A) Fatigue

B) Corrosion

C) Fire

D) Weathering

Answer: A

17. High tensile steel has low _____ losses.

A) Relaxation

B) Compression

C) Bearing

D) Density

Answer: A

18. PSC members generally have _____ cross-sections than RCC.

A) Larger

B) Smaller

C) Equal

D) Thicker

Answer: B

19. Prestressing counteracts _____ stresses.

A) Tensile

B) Compressive

C) Bearing

D) Thermal

Answer: A

20. Prestressed concrete combines concrete and _____.

A) Timber

B) Steel

C) Brick

D) Stone

Answer: B