

UNIT-V: COMPOSITE BEAMS AND DEFLECTIONS

1. A composite beam consists of two materials acting _____.

- A) Independently
- B) Together
- C) Separately
- D) Randomly

Answer: B

2. In a propped composite beam, the precast unit is supported during _____.

- A) Prestressing
- B) Casting of slab
- C) Loading
- D) Testing

Answer: B

3. In an unpropped composite beam, the precast unit carries the weight of _____ concrete.

- A) Hardened
- B) Fresh
- C) Prestressed
- D) Cured

Answer: B

4. Composite action depends on proper _____ between components.

- A) Bond
- B) Density
- C) Weight
- D) Thickness

Answer: A

5. Differential shrinkage occurs because of _____ shrinkage rates.

- A) Equal
- B) Different
- C) Constant
- D) Zero

Answer: B

6. Composite beams are widely used in _____ construction.

- A) Bridge
- B) Timber
- C) Masonry
- D) Earthen

Answer: A

7. The stress distribution in a composite beam depends on _____.

- A) Material properties
- B) Colour
- C) Weight only
- D) Shape only

Answer: A

8. Deflection is the _____ displacement of a structural member.

- A) Vertical
- B) Horizontal
- C) Circular
- D) Axial

Answer: A

9. Excessive deflection affects _____.

- A) Serviceability
- B) Strength only
- C) Density
- D) Durability only

Answer: A

10. Short-term deflection is calculated using _____ loads.

- A) Immediate
- B) Future
- C) Cyclic
- D) Thermal

Answer: A

11. Long-term deflection is influenced by _____.

- A) Creep
- B) Shrinkage

C) Both A and B

D) Neither A nor B

Answer: C

12. Prestressing generally _____ beam deflections.

A) Increases

B) Reduces

C) Eliminates

D) Doubles

Answer: B

13. Camber in PSC beams is caused by _____.

A) Dead load

B) Prestressing force

C) Wind load

D) Temperature

Answer: B

14. Deflection control is necessary for structural _____.

A) Appearance and serviceability

B) Colour

C) Density

D) Weight

Answer: A

15. Long-term deflection prediction includes the effect of _____.

A) Creep

B) Shrinkage

C) Relaxation

D) All of the above

Answer: D

16. IS Code specifies limits for _____.

A) Deflections

B) Color

C) Density

D) Temperature

Answer: A

17. Composite beams improve structural _____.

A) Efficiency

B) Density

C) Thickness

D) Color

Answer: A

18. The upward deflection due to prestressing is called _____.

A) Sag

B) Camber

C) Rotation

D) Drift

Answer: B

19. Service load deflection should be within _____ limits.

A) IS Code

B) Contractor's choice

C) Manufacturer's choice

D) Arbitrary

Answer: A

20. Differential shrinkage causes additional _____ in composite beams.

A) Stresses

B) Density

C) Weight

D) Volume

Answer: A