25CE301 BUILDING MATERIALS AND CONCRETE TECHNOLOGY

UNIT –IV

Part-A Objective Questions

1. Workability of concrete refers to:
   a) Strength
   b) Ease of mixing and placing
   c) Density
   d) Hardness
   Answer: b) Ease of mixing and placing
2. Which test is commonly used to measure workability?
   a) Crushing test
   b) Slump test
   c) Hardness test
   d) Impact test
   Answer: b) Slump test
3. Low workability concrete gives:
   a) Easy compaction
   b) Difficult handling
   c) High flow
   d) Excess bleeding
   Answer: b) Difficult handling
4. Segregation in concrete means:
   a) Uniform mixing
   b) Separation of ingredients
   c) Hydration
   d) Curing
   Answer: b) Separation of ingredients
5. Bleeding in concrete is caused by:
   a) Excess water
   b) Lack of cement
   c) Fine aggregates
   d) Air entrainment
   Answer: a) Excess water
6. Compaction of concrete is done to:
   a) Increase voids
   b) Remove air voids
   c) Reduce strength
   d) Increase shrinkage
   Answer: b) Remove air voids
7. Vee-Bee test is suitable for:
   a) Highly workable concrete
   b) Low workable concrete
   c) Mortar only

d) Cement paste
Answer: b) Low workable concrete

8. Flow table test is mainly used for:
   a) Dry concrete
   b) Highly workable concrete
   c) Aggregate grading
   d) Cement testing
   Answer: b) Highly workable concrete
9. Machine mixing produces:
   a) Non-uniform concrete
   b) Uniform concrete
   c) Weak concrete
   d) Segregated concrete
   Answer: b) Uniform concrete
10. The process of maintaining moisture in concrete is called:
    a) Finishing
    b) Batching
    c) Curing
    d) Compacting
    Answer: c) Curing
11. Proper curing improves:
    a) Shrinkage
    b) Strength and durability
    c) Bleeding
    d) Segregation
    Answer: b) Strength and durability
12. The strength of concrete increases with:
    a) Age
    b) Excess water
    c) Segregation
    d) Bleeding
    Answer: a) Age
13. Compressive strength of concrete is usually determined using:
    a) Cube test
    b) Impact test
    c) Hardness test
    d) Slump test
    Answer: a) Cube test
14. Tensile strength of concrete is much:
    a) Higher than compressive strength
    b) Lower than compressive strength
    c) Equal to compressive strength
    d) Zero
    Answer: b) Lower than compressive strength
15. Flexural strength is important for:
    a) Columns
    b) Beams and pavements
    c) Footings
    d) Foundations
    Answer: b) Beams and pavements
16. Abram's law relates strength with:
    a) Aggregate size
    b) Water–cement ratio

c) Temperature
d) Density
Answer: b) Water–cement ratio

17. Increase in water–cement ratio generally:
    a) Increases strength
    b) Decreases strength
    c) Has no effect
    d) Increases density
    Answer: b) Decreases strength
18. Shrinkage in concrete occurs mainly due to:
    a) Loss of moisture
    b) Gain of moisture
    c) Excess aggregates
    d) Excess steel
    Answer: a) Loss of moisture
19. Creep is defined as:
    a) Sudden deformation
    b) Time-dependent deformation under load
    c) Expansion due to heat
    d) Loss of workability
    Answer: b) Time-dependent deformation under load
20. Maturity concept is related to:
    a) Aggregate grading
    b) Strength development with time and temperature
    c) Cement color
    d) Water absorption
    Answer: b) Strength development with time and temperature

Part-B Fill in the blanks

1. Cube test measures _____ strength. **Answer:** Compressive
2. Split tensile test measures _____ strength. **Answer:** Tensile
3. Flexural strength is also called _____. **Answer:** Modulus of Rupture
4. Rebound hammer test is a _____ test. **Answer:** Non-destructive
5. UPV stands for _____ Pulse Velocity. **Answer:** Ultrasonic
6. Core test is a _____ test. **Answer:** Destructive
7. Standard concrete cube size is _____ mm. **Answer:** 150 × 150 × 150
8. Concrete strength is generally tested after _____ days. **Answer:** 28
9. NDT stands for _____. **Answer:** Non-Destructive Testing
10. Durability depends on concrete _____. **Answer:** Permeability
11. Carbonation reduces concrete _____. **Answer:** Alkalinity
12. Corrosion mainly affects _____ reinforcement. **Answer:** Steel
13. Concrete cover protects reinforcement from _____. **Answer:** Corrosion
14. UPV measures _____ through concrete. **Answer:** Pulse Velocity
15. Cracks are repaired using _____ grout. **Answer:** Epoxy