

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

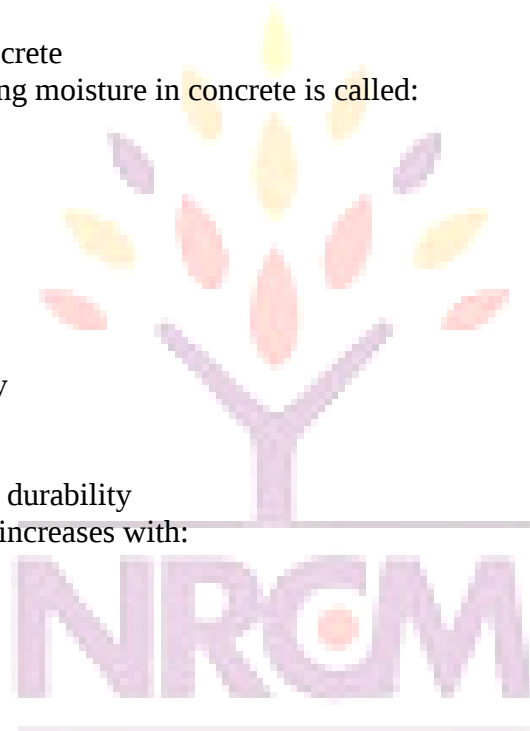
d) Foundations

Answer: b) Beams and pavements

16. Abram's law relates strength with:

a) Aggregate size

b) Water-cement ratio



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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:** $150 \times 150 \times 150$
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