

**Chettinad**

College of Engineering & Technology

Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai.

Department of Civil Engineering**CE8404 – CONCRETE TECHNOLOGY****UNIT III MCQ**

1. The _____ compressive strength required from structural consideration.
 - a) Nominal
 - b) Minimum**
 - c) Maximum
 - d) NoANS: b) Minimum

2. The adequate workability necessary for _____ compaction with the compacting equipment available.
 - a) Half
 - b) Quarter
 - c) Full**
 - d) DoubleANS: c) Full

3. _____ water-cement ratio content to give adequate durability for the particular site conditions.
 - a) Minimum
 - b) Nominal
 - c) .5
 - d) Maximum**ANS: d) Maximum

4. _____ cement content to avoid shrinkage cracking due to temperature cycle in mass concrete.
 - a) Minimum
 - b) Nominal
 - c) .5
 - d) Maximum**ANS: d) Maximum

5. _____ has designated the concrete mixes into a number of grades as M10, M15.
 - a) IS 456-2000**
 - b) IS 456-2010

- c) IS 513-1999
 - d) IS 465-2000
- ANS: a) IS 456-2000

6. What is the approx. mix proportion for M10?

- a) 1:3:6**
- b) 1:2:4
- c) 1:1.5:3
- d) 1:1:2

ANS: a) 1:3:6

7. What is the approx. mix proportion for M15?

- a) 1:3:6
- b) 1:2:4**
- c) 1:1.5:3
- d) 1:1:2

ANS: b) 1:2:4

8. What is the approx. mix proportion for M20?

- a) 1:3:6
- b) 1:2:4
- c) 1:1.5:3**
- d) 1:1:2

ANS: c) 1:1.5:3

9. What is the approx. mix proportion for M25?

- a) 1:3:6
- b) 1:2:4
- c) 1:1.5:3
- d) 1:1:2**

ANS: d) 1:1:2

10. Maximum nominal size of aggregates to be used in concrete may be as large as possible within the limits prescribed by _____

- a) IS 456-2000**
- b) IS 456-2010
- c) IS 513-1999
- d) IS 465-2000

ANS: a) IS 456-2000

11. Depending on the degree of workability and placing condition determine the _____
- a) **Slump value**
 - b) The maximum size of aggregate
 - c) The amount of mixing water
 - d) The minimum water-cement ratio
- ANS: a) Slump value
12. Depending on the economical availability and dimensions of the structure determine the _____
- a) Slump value
 - b) **The maximum size of aggregate**
 - c) The amount of mixing water
 - d) The minimum water-cement ratio
- ANS: b) The maximum size of aggregate
13. For the given slump and maximum size of coarse aggregate determine the _____
- a) Slump value
 - b) The maximum size of aggregate
 - c) **The amount of mixing water**
 - d) The minimum water-cement ratio
- ANS: c) The amount of mixing water
14. Determine the _____ either from strength considerations or from durability considerations.
- a) Slump value
 - b) The maximum size of aggregate
 - c) The amount of mixing water
 - d) **The minimum water-cement ratio**
- ANS: d) The minimum water-cement ratio
15. Determine the amount of cement per unit volume of concrete from _____
- a) Slump value
 - b) The maximum size of aggregate
 - c) The amount of mixing water
 - d) **The maximum size of aggregate and the amount of mixing water**
- ANS: d) The maximum size of aggregate and the amount of mixing water
16. This cement content should _____ the cement content required based on durability criteria.
- a) Be more than
 - b) Be equal to
 - c) Be less than
 - d) **Not be less than**
- ANS: d) Not be less than

17. The lower the w/c ratio _____ the strength of concrete.
a) **Higher**
b) Lower
c) Poor
d) Moderate
ANS: a) Higher
18. The aim of the designer should always be to get concrete mixtures of optimum strength at _____ cement content and _____ workability.
a) Maximum, Nonacceptable
b) Minimum, Nonacceptable
c) Maximum, acceptable
d) **Minimum, acceptable**
ANS: d) Minimum, acceptable
19. Maximum size of aggregates should not be larger than _____
a) **1/5 the minimum dimension of structural members**
b) 1/4 the minimum dimension of structural members
c) 1/3 the minimum dimension of structural members
d) 1/6 the minimum dimension of structural member
ANS: a) 1/5 the minimum dimension of structural members
20. Maximum size of aggregates should not be larger than _____
a) **1/3 the thickness of a slab**
b) 1/2 the thickness of a slab
c) 1/1 the thickness of a slab
d) 1/4 the thickness of a slab
ANS: a) 1/3 the thickness of a slab
21. According to IRC:15-2011, Characteristic Flexural Strength at 28 days is _____
a) 4 N/mm²
b) **4.5 N/mm²**
c) 5 N/mm²
d) 3.5 N/mm²
ANS: b) 4.5 N/mm²
22. According to IRC:15-2011 _____ % Fly ash is required to be replaced with the total cementitious materials.
a) 15
b) **20**

- c) 25
 - d) 30
- ANS: b) 20

23. According to IRC:15-2002 _____% Fly ash is required to be replaced with the total cementitious materials.
- a) 15
 - b) 20
 - c) 25**
 - d) 30

ANS: c) 25

24. According to IRC:15-2002, Maximum nominal size of aggregates is _____
- a) 20 mm crushed aggregates**
 - b) 31.5 mm crushed aggregates
 - c) 25 mm crushed aggregates
 - d) 30.5 mm crushed aggregates

ANS: a) 20 mm crushed aggregates

25. According to IRC:15-2011, Maximum nominal size of aggregates is _____
- a) 20 mm crushed aggregates
 - b) 31.5 mm crushed aggregates**
 - c) 25 mm crushed aggregates
 - d) 30.5 mm crushed aggregates

ANS: b) 31.5 mm crushed aggregates

ChettinadTech