

Q.21 Write the various precautions to be taken, during and after the concreting in hot weather conditions.

Q.22 Describe the process of testing the strength of concrete using the pulse velocity method.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 a) Explain the procedure of grading of coarse aggregates in detail. (4 Marks)

b) Write down any four precautions to be taken into consideration for the storage of aggregates at site. (2 Marks)

c) Write down the criteria for the selection of a suitable size of vibrator for different situation during concreting. (2 Marks)

Q.24 Explain in detail the adjustments made to nominal concrete mix for water absorption of aggregate.

Q.25 Explain the process of mechanical compaction of concrete in detail.

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3rd Sem / Civil

Subject : Concrete Technology

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 What is the objective of concrete technology?

a) To find the material strength

b) Calculate the amount of cement required

c) To define and understand concepts related to cement

d) To define and understand concepts related to concrete technology

Q.2 The compound of cement abbreviated as C₄AF represents _____

a) Di-calcium Silicate

b) Tri-calcium Aluminate

c) Di-calcium Sulphate

d) Tetra-calcium Alumino ferrite

Q.3 Workability of concrete increases with _____

- a) Increase in water content
- b) Finer aggregates
- c) Increase in porosity
- d) High Temperature

Q.4 The capacity of a small concrete mixer is _____

- a) $.20\text{m}^3$ to $.80\text{m}^3$
- b) $.30\text{m}^3$ to $.90\text{m}^3$
- c) $.20\text{m}^3$ to $.90\text{m}^3$
- d) $.30\text{m}^3$ to $.8\text{m}^3$

Q.5 Joint flexibility indicates that _____

- a) Joints are rigid
- b) Relative swinging is allowed with a tolerance
- c) Restricts movement
- d) None of these

Q.6 Rapid evaporation may cause _____

- a) Elastic shrinkage
- b) High workability
- c) Plastic shrinkage
- d) Good strength

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 As per IS456:2000, the PH value of water for concrete mix shall NOT be less than _____

Q.8 For concrete exposed to very aggressive environment the water-cement ratio should be lower than _____ (0.4/0.5)

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Q.9 Classification of admixtures are classified into _____ types. (Two/Five)

Q.10 Minimum voids in aggregates can be obtained by using the aggregates of _____ (varying size / Same Shape)

Q.11 Surface vibrator is effected only when the thickness of concrete member does not exceed _____ (200 mm/ 500mm)

Q.12 Concrete is not recommended to be placed at a temperature below _____ (4°C / 5°C)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Write any four advantages of concrete as a construction material.

Q.14 Write a short note on “Bulking of Sand”.

Q.15 Describe the water -cement ratio and write down the limitations of W/C ratio law.

Q.16 Write the precautions to prevent the segregation in concrete.

Q.17 Describe the effects of addition of chemical admixtures on strength of concrete.

Q.18 Write a short note on “Batching of Aggregates using Gauge Box”

Q.19 Write down the purposes of curing of concrete.

Q.20 Write a short note on “Ready Mix Concrete.

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