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4th Sem / Civil, Brick Tech, Constr. Mgmt., Highway Engg.

Subject:- Concrete Technology

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Reinforcement provided in concrete make it (CO1)
a) Strong in tension b) Weak in tension
c) weak in strength d) none of above

Q.2 Initial setting time of rapid-hardening Portland cement is nearly (CO2)
a) half a minute b) 5 minutes
c) 30 minutes d) 45 minutes

Q.3 Segregation can be prevented by (CO3)
a) Increasing continuous
b) High water content
c) Reducing height
d) Using heavy aggregate

Q.4 High temperatures (CO4)
a) increase the strength of concrete
b) decrease the strength of concrete
c) has no effect on strength of concrete
d) first increases and then decreases the strength of concrete

Q.5 1 bag of cement is taken as equal to (CO6)
a) 15 litres b) 25 litres
c) 35 litres d) 45 litres

Q6 The workability of concrete can be improved by adding (CO5)
a) fly ash b) Calcium chloride
c) Plasticizers d) Copper sulphate

Q.7 Addition of retarder to concrete decreases all of the following except (CO7)
a) rate of hydration
b) water-cement ratio
c) workability and compressive strength
d) rate of development of strength

Q8 Which type of concrete is used for construction of hydraulic structures (CO8)
a) light weight concrete
b) fibre reinforced concrete
c) ready mix concrete
d) all of above

Q.9 The final operation of finishing is called_____ (CO9)
a) Screeding b) Floating
c) Trowelling d) none of above

Q.10 The formation of cement paste on surface of concrete is called (CO4)
a) Creep b) Freezing
c) Laitance d) flow

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 The process of accurate measurement of all concrete material to ensure uniformity of proportions is called _____ (CO8)

Q.12 The standard size of concrete mould is_____ (CO9)

Q.13 Plasticizers are of great use where high degree of _____ is required (CO6)

Q.14 The nominal mix corresponding to M15 is _____. (CO5)

Q.15 Compaction factor test is_____ than slump test. (more accurate / less accurate) (CO4)

Q.16 Water cement ratio is weight of _____ to weight of_____ . (CO3)

Q.17 For OPC, the initial setting time should not be less than _____ minutes. (CO2)

Q.18 The mixture of cement, sand and water is called as _____. (CO1)

Q.19 Slump test is not suitable for concrete mix of_____ workability (CO4)

Q.20 Maximum water cement ratio allowed in structural concrete is_____ (CO3)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Why excessive compaction is not good for concrete? (CO8)

Q.22 Write the precautions while using hot weather concreting. (CO7)

Q.23 Out of concrete with 0.7 w/c ratio or 0.5 w/c ratio which is stronger ? Why? (CO3)

Q.24 Write the uses of concrete in comparison to other Building materials. (CO1)

Q.25 What is the difference between shrinkage and creep? (CO4)

Q.26 Write short note on admixtures. (CO6)

Q.27 What is batching? Explain methods of batching. (CO8)

Q.28 Differentiate between lean and rich mix. (CO4)

Q.29 What are the various objectives of mix design? (CO5)

Q.30 Write short note on ultra sonic pulse velocity Test. (CO9)

Q.31 Why does workability decreases with time? (CO4)

Q.32 What do you understand by bulking of sand? (CO2)

Q.33 What do you mean by formwork? (CO8)

Q.34 Write short note on Portland Pozzalana cement. (CO2)

Q.35 Write about hot weather concreting and precaution under which it is used. (CO7)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain the properties of concrete in plastic stage. (CO4)

Q.37 What is compaction? Explain methods of Compaction. (CO8)

Q.38 Why is field adjustment important? Explain various adjustment required for normal mix. (CO5)