

SUBJECT: CONCRETE TECHNOLOGY

Day: Monday
Date: 03/12/2018

Time: 10.00 AM TO 01.00 PM
Max Marks. 60

W-2018-2290

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Use of scientific non-programmable calculator is **ALLOWED**

Q.1 a) Give ASTM classification of cement. (05)
b) Explain “Grading of aggregates” (05)

OR

- a) What are the different methods of manufacturing of cement? Explain any one method. (05)
- b) Explain Quality of water use in concrete with IS requirements and Explain use of sea water in concrete. (05)

Q.2 a) Enlist various factors that affect the workability of concrete. (05)
b) What are the factors that affect the strength of concrete? (05)

OR

- a) What is effect of temperature on curing? Explain member curing method. (05)
- b) Explain different test on fresh concrete. (05)

Q.3 a) Explain the terms i) Creep ii) Shrinkage (05)
b) Explain the relation between compressive strength & tensile strength of concrete. (05)

OR

- a) Explain the stress –strain curves for different mixes and explain Modulus of Elasticity? (05)
- b) Explain “Creep –time curve” (05)

Q.4 a) Define design mix and explain the factors governing the selection of mix proportions. (05)
b) Explain the DOE method of mix design. (05)

OR

- a) Explain concept of mix design. (05)
- b) Write a short note on “Ready mix concrete.” (05)

Q.5 a) Write a short note on Marsh Cone Test. (05)
b) Define Admixture. State the function of Admixture. (05)

OR

What are Admixtures? Write a short note on Plasticizers and super Plasticizers (10)

Q.6 a) Explain light weight concrete? (05)
b) Write short note on Roller compacted concrete (05)

OR

Comment on various factors affecting durability of concrete. Explain any one test on Durability of Concrete (10)