

No. of Printed Pages : 4
Roll No.

220731

3rd Sem / Civil Engineering
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 Concrete Technology ?
- a) Concrete Technology deals with the study of bricks
 - b) Concrete Technology is the study of building materials.
 - c) Concrete Technology deals with the study of properties of concrete.
 - d) None of the mentioned above
- Q.2 The compound of cement abbreviated as C_2S represents.
- a) Di-calcium Silicate
 - b) Tri-calcium Aluminate
 - c) Di-calcium Sulphate
 - d) Tetra- calcium Alumino Ferrite
- Q.3 Dimensional change in concrete occur due to _____
- a) Creep
 - b) Shrinkage
 - c) Elasticity
 - d) All of these

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- Q.4 The capacity of a concrete mixer is measured in term of _____.
- a) Total volume of concrete produced per day
 - b) Total volume of concrete produced in 8 hours
 - c) Volume of concrete mix handled per batch
 - d) Total volume of concrete produced per hour
- Q.5 Surface vibrator is effective only when the thickness of concrete member does not exceed.
- a) 100 mm
 - b) 125 mm
 - c) 150 mm
 - d) 200 mm
- Q.6 For under water construction _____ cement is used.
- a) Portland pozolana Cement
 - b) Quick setting Cement
 - c) Ordinary Portland Cement
 - d) Expansive Cement

SECTION-B

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

- Q.7 Adding water increases _____ of the concrete.(Workability / Strength)
- Q.8 _____ is the range of water in M -25 (21 L to 27 L / 34 L to 36 L)
- Q.9 Admixtures that cause early setting and hardening of concrete are called _____(Retarders/ Accelerators)

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- Q.10 If fineness modulus of sand is 2.5, it is graded as _____ (Fine sand / Coarse Sand)
- Q.11 Compaction factor test is applicable when the size of coarse aggregate is up to _____ (25 mm / 40 mm)
- Q.12 Concrete is not recommended to be placed at a temperature above _____ (40°C / 50°C)

SECTION-C

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

- Q.13 Write any four advantages and four disadvantages of concrete as a construction material.
- Q.14 Write a short note on “Specific Gravity of Aggregates.”
- Q.15 Describe the effects of water-cement ratio on the strength of concrete.
- Q.16 Write down the various causes of segregation in concrete.
- Q.17 Write a short note on “Mineral admixtures”.
- Q.18 Write down a short on "maintenance and care of Mixes".
- Q.19 Write down the objectives of curing of concrete.

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- Q.20 Write the various precautions to be taken, before and during the concreting cold weather conditions.
- Q.21 Write a short note on “Fly Ash Concrete”.
- Q.22 Describe the process of testing the strength of concrete using the rebound hammer test.

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 fine aggregate in detail. (4 marks)
- b) Describe the effect of storage on strength of cement. (2 marks)
- c) Write down the criteria for the removal of form work as per specification given in IS: 456-2007. (2 marks)
- Q.24 Write down the stepwise procedure for design of normal concrete as prescribed by IS: 456-2007
- Q.25 Enlist the various methods of transportation of concrete and explain any one of them in detail.

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