



K. K. Wagh Institute of Engineering Education & Research, Nashik
(An Autonomous Institute From A.Y. 2022-23)

WINTER-2025	
Exam Seat No.:	
Academic Year:2025-2026	Semester:V
Class:TY	Program:B.Tech
Branch Code:CIV	Pattern:2023
Name of Course:Advanced Concrete Technology	Course Code:2304306A
Max. Marks:60	Duration:2.30 Hrs.

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains 02 page(s).
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome.

Marks CO

Question No. 1

- 1a) Describe the effect of SCM on the hydration process of Portland cement? (6) CO1

Question No. 2

- 2a) Illustrate the applications of chemical admixtures? (6) CO2

Question No. 3

- 3a) Illustrate the fresh properties of SIFCON? (8) CO3

OR

- 3b) Explain the applications of synthetic fibers)? (8) CO3

- 3c) Describe the Slurry Infiltrated Fiber CONcrete (SIFCON)? (8) CO3

OR

- 3d) Explain types of steel fibers? (8) CO3

Question No. 4

- 4a) Elaborate on the permeability on concrete? (8) CO4

OR

- 4b) Explain the carbonation? (8) CO4

- 4c) Elaborate the plastic shrinkage? (8) CO4

OR

- 4d) Illustrate the acid attack on concrete? (8) CO4

Question No. 5

- 5a) Describe the ultrasonic pulse velocity method on concrete? (8) CO5

OR

5b) Elaborate the absorption tests on concrete? (8) CO5

5c) Elaborate electrical resistivity method on concrete? (8) CO5

OR

5d) Explain in detail the permeability tests on concrete? (8) CO5

..... **End of question paper**.....