



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:VII
Class:FINAL	Program:B.Tech
Branch Code:CIV	Pattern:2022
Name of Course:Water Supply Engineering	Course Code:CIV224002
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 and level of Blooms Taxonomy of the Question/sub-question.

Marks CO

Question No. 1

- 1a) What are the physical, chemical and biological properties of water (6) 1

Question No. 2

- 2a) Define sedimentation and its working principle also What are different types of sedimentation Explain any one. (6) 2

Question No. 3

- 3a) Explain the theory of coagulation and flocculation in water treatment. (8) 3

OR

- 3b) Describe different types of filter media used in water treatment and their characteristics (8) 3

- 3c) Design considerations of a Flocculation Chamber (8) 3

OR

- 3d) Explain dual media and multimedia filters with neat description and advantages (8) 3

Question No. 4

- 4a) Define Salination , its causes and effect. Also define desalination and its methods (8) 4

OR

- 4b) Explain Reverse Osmosis (RO) with principle, process and applications (8) 4

- 4c) Explain Disinfection with mechanism, factors affecting, and types of disinfectants (8) 4

OR

- 4d) Role of GIS and Drones in Water Management. & Government Initiatives (Water Sector) (8) 4

Question No. 5

- 5a) Define sewage and explain the sources of sewage (8) 5

OR

- 5b) Explain variations in sewage flow and factors affecting it. (8) 5
- 5c) Why pumping of sewage is necessary? Explain the location of sewage pumping stations. (8) 5

OR

- 5d) Describe sampling methods and physical, chemical, biological characteristics of sewage (8) 5

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