Total No. of Printed Pages: 02

PRN No.	

PAPER CODE	U213-223 (RE)

December 2023 (REEXAM)

SY B.TECH (SEMESTER - I)

COURSE NAME: **ENVIRONMENTAL ENGINEERING – I** **Branch: Civil Engineering** **COURSE CODE:** **CVUA21203**

(PATTERN 2020)

Time: [2 Hrs] **[Max. Marks: 60]**

(*) Instructions to candidates:

1) **Figures to the right indicate full marks.**
2) **Use of scientific calculator is allowed**
3) **Use suitable data wherever required**
4) **All questions are compulsory. Solve any two sub questions each from each Question 1 ,2, 3,4,5,and 6 respectively**

Q. No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) Explain the Water Supply Scheme in details.	[5]	CO 1	II. Understanding
	b) Illustrate the objectives of water treatment.	[5]	CO 1	II. Understanding
	c) Classify the variations in water demand.	[5]	CO 1	II. Understanding
Q2	a) Compare the properties of ductile iron with mild steel in the conveyance of water.	[5]	CO 2	II. Understanding
	b) Explain the forces acting on the pipes during the conveyance of water.	[5]	CO 2	II. Understanding
	c) Explain the procedure towards the laying down of the pipeline for conveyance of water.	[5]	CO 2	II. Understanding
Q3.	a) Classify the various types of Aeration Techniques used in water treatment.	[5]	CO 3	II. Understanding
	b) Compare the coagulation process and flocculation process.	[5]	CO 3	II. Understanding
	c) Compare the Aluminum based Coagulant with Iron based Coagulant.	[5]	CO 3	II. Understanding

Q.4	a) List down the mechanisms involved in filtration operation.	[5]	CO 4	IV. Analyzing
	b) Compare the Slow Sand Filter with Rapid Sand Filter.	[5]	CO 4	IV. Analyzing
	c) List the disinfection methods used for the water treatment.	[5]	CO 4	IV. Analyzing
Q.5	a) Distinguish between Membrane Filtration with Granular Filtration.	[5]	CO 5	IV. Analyzing
	b) Classify the methods of water softening.	[5]	CO 5	IV. Analyzing
	c) Categorize the membrane filtration processes towards the removal of dissolved minerals from water.	[5]	CO 5	IV. Analyzing
Q.6)	a) Explain the Operation and maintenance in water supply scheme	[5]	CO 6	II. Understanding
	b) Explain the components of Elevated Service Reservoirs.	[5]	CO 6	II. Understanding
	c) Compare the Ring type system of water distribution with Grid Iron	[5]	CO 6	II. Understanding

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