

Total No. of Questions – [3]

Total No. of Printed Pages: 2

G.R. No.	
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PAPER CODE	U212-223 (EST - DSY)
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**July 2023 (ENDSEM) EXAM**  
**S.Y. B. TECH. (DSY) AY 2022-23 SEMESTER - I**  
**COURSE NAME: ENVIRONMENTAL ENGINEERING I**  
**COURSE CODE: CVUA21203**  
**(PATTERN 2020)**

Time: [1Hr]

[Max. Marks: 30]

**(\*) Instructions to candidates:**

- 1) Use of scientific calculator is allowed
- 2) Use suitable data where ever required
- 3) All questions are compulsory

Question No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) Define the following- i) Chlorination ii) De-chlorination iii) Super-chlorination iv) Break Point Chlorination	[4]	[4]	[I Remembering]
	b) Explain the Working of Rapid Sand Filtration process in detail (Draw the figure)	[6]	[4]	[II Understanding]
	OR			
	c) Develop the relation between no of microorganisms after disinfection with respect to time 't' (Laws of Disinfection).	[6]	[4]	[III Applying]
Q.2	a) Explain the concept of Automation in water distribution networks.	[4]	[4]	[II Understanding]
	b) Explain the technique towards the removal of taste and odor from water.	[6]	[5]	[II Understanding]
	OR			
	c) Explain the Lime Soda process towards the removal of temporary, permanent hardness, dissolved Iron and CO <sub>2</sub> gas from water (give the	[6]	[5]	[II Understanding]

	chemical reactions).			
Q.3	a) Compare the Gravity method of water supply with Pumping Method.	[4]	[6]	[II Understanding ]
	b) Explain the need of operation and maintenance in water supply.	[6]	[6]	[II Understanding ]
	OR			
	c) List the components of Elevated Service Reservoir and explain any two.	[6]	[6]	[I Remembering ,II Understanding]