

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE				
<b>Mid Semester Examination – Sept./Oct. 2019</b> Course: B. Tech in Civil Engineering Subject Name: Environmental Engineering Subject Code: BTCVC 504 Max Marks: 20      Date: 23/09/2019      Duration: - 1 Hr.		Sem: V		
		FORM NO.	F/TEAH/06	
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<b>Instructions to the Students:</b> 1. Question 1 is compulsory. 2. Draw necessary diagram and sketches as and when required. 3. Assume suitable data as and when required.				
Q. 1	Solve all the questions.	Level	CO	Marks
				6
	1. The average quantity of water (in lpcd) required for domestic purposes according to IS code is _____. a) 100 b) 120 c) 70 d) 135	1	CO1	1
	2. Identify the correct relation between the following? a) Dissolved solid = Total solid + Suspended solid b) Dissolved solid = Total solid – Suspended solid c) Total solid = Dissolved solid / Suspended solid d) Dissolved solid = Suspended solid – Total solid	1	CO2	1
	3. State whether the following statement is True or False. Carbonate hardness can be removed by adding lime to water. a) True b) False	1	CO2	1
	4. Which of the following process is used to remove the colloidal particles from water? a) Chemical precipitation b) Chemical coagulation c) Ion exchange d) Adsorption	2	CO2	1
	5. In which type of settling, sedimentation of discrete particles takes place? a) Zone settling b) Compression settling c) Hindered settling d) Discrete settling	1	CO2	1
	6. The pressure in the distribution mains does not depend on a) Altitude to supply water b) Fire fighting requirements c) Availability of funds d) Quality of water	2	CO3	1

Q.2	Solve Any Two of the following.			3 X 2										
(A)	What do you understand by treatment of water? Why it is necessary? Give an outline of various processes adopted for treatment of water with sketch.	1	CO2	3										
(B)	Explain different theory of filtration.	1	CO2	3										
(C)	Explain Break point chlorination in detail with diagram.	2	CO2	3										
Q. 3	Solve Any One of the following.			8										
(A)	Estimate projected population for the year of 2019, and 2022 based on the following data by using various methods.	2	CO1	8										
	<table><tr><td>Year</td><td>Population</td></tr><tr><td>1982</td><td>72000</td></tr><tr><td>1992</td><td>85000</td></tr><tr><td>2002</td><td>1,10,500</td></tr><tr><td>2012</td><td>1,44,000</td></tr></table>	Year	Population	1982	72000	1992	85000	2002	1,10,500	2012	1,44,000			
Year	Population													
1982	72000													
1992	85000													
2002	1,10,500													
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(B)	Design a Cascade Aerator having a discharge of 115 MLD. Assume suitable data.	2	CO2	8										
*** End ***														