

MVSR ENGINEERING COLLEGE, NADERGUL
BE I Year Semester-II Internal Assessment Test-I, Feb -2021
Subject: Chemistry (online exam)
(Group B- Civil Branch only)

Duration: 1.5 Hour

Marks: 20 Marks

Answer **All** questions from **Part – A** and any **two** from **Part –B**

Part –A (Answer All questions) (3 x 2 = 6 Marks)			
1	Calculate total, temporary, permanent hardness of water in terms CaCO_3 equivalents as mg/L & ppm caused by the salts present per litre of the sample water. 16.2 mg/L of $\text{Ca}(\text{HCO}_3)_2$, 11.1 mg/L of CaCl_2 , 60 mg/L of MgSO_4 , 19 mg/L of MgCl_2 and 40 mg/L of NaCl . Given molecular weights of the salts $\text{Ca}(\text{HCO}_3)_2=162$, $\text{CaCl}_2=111$, $\text{MgSO}_4=120$, $\text{MgCl}_2=95$, $\text{NaCl}=58.5$.	CO1	2M
2	Define break point chlorination	CO1	2M
3	Write the structure of the monomers and mention their functionality of the following polymers. (i) PVC (ii) TEFLON	CO3	2M
Part –B (Answer any two) 7 x 2 =14 Marks			
4	(a) What is caustic embrittlement? Explain.	CO1	3M
	(b) Explain Zeolite process for softening of water with a neat diagram.	CO1	4M
5	(a) Write the mechanism of free radical chain polymerisation.	CO3	4M
	(b) What is a refractory? Write any two properties of refractories.	CO3	3M
6	(a) Write about these two boiler troubles (a) scales and sludges (b) priming and foaming.	CO1	3M
	(b) What is glass? Give its manufacturing process	CO3	4M

CO = Course Outcome

NOTE: Submit your PDF file to the link given below

<https://forms.gle/DFYcsxiYqXTQuw1f6>