

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**  
**End Semester Examination – Summer 2022**

**Course: B. Tech**  
**Subject: Engineering Chemistry**  
**Marks: 60**

**Date: 20/08/2022**

**Sem: II**  
**Subject code: BTBS202**  
**Duration: 3.45 Hr.**

**Instructions to the Students:**

1. All the questions are compulsory.
2. Draw neat diagram wherever necessary
3. Figures to right indicates full marks

		(Level/CO)	Marks
<b>Q. 1</b>	<b>Solve Any TWO of the following.</b>		
A)	Explain in details Zeolite process for softening of water with its advantages and disadvantages.	2	6
B)	Explain the determination of hardness of water by EDTA method.	1	6
C)	Discuss disadvantages of hard water in Domestic and Industrial use.	2	6
<b>Q.2</b>	<b>Solve Any TWO of the following.</b>		
A)	Write Phase rule equation. Explain the term Phase and Component with suitable examples.	1	6
B)	Draw the Phase diagram of Water System and discuss line/curves, areas and triple point in it.	2	6
C)	Describe Phase diagram of two components Ag – Pb alloy system.	2	6
<b>Q. 3</b>	<b>Solve Any TWO of the following.</b>		
A)	Define Corrosion and explain Cathodic protection method to minimize the rate of corrosion.	2	6
B)	Discuss direct chemical corrosion (dry corrosion) occurs due to oxygen.	2	6
C)	Write a note on: Galvanic corrosion.	1	6
<b>Q.4</b>	<b>Solve Any TWO of the following.</b>		
A)	What are Fuels? How are they classified? Write characteristics of a good fuel.	1	6
B)	Describe determination of percentage of moisture content and volatile matter of Proximate analysis of coal.	2	6
C)	Discuss any three Physical properties of lubricants.	1	6
<b>Q. 5</b>	<b>Solve Any TWO of the following.</b>		
A)	Explain the method of conductance measurement by Wheatstone's Bridge.	2	6
B)	Explain Conductometric titration with any two examples.	2	6
C)	Describe Ostwald's theory of Acid-Base Indicator.	1	6

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