

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular & Supplementary Winter Examination-2023

Course: B. Tech

Branch: Common to All Branches

Sem: I

Subject: Engineering Chemistry

Subject code: BTBS102

Marks: 60

Date: 03-01-24

Duration: 3 Hr.

**Instructions to the Students:**

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

	(Level /CO)	Marks
<b>Q.1 Solve Any TWO of the following.</b>		
A) Explain the determination of hardness of water by EDTA method.	2	06
B) Discuss disadvantages of hard water in Domestic and Industrial use.	1	06
C) Explain Ion exchange process of softening of water.	2	06
<b>Q.2 Solve Any TWO of the following.</b>		
A) Discuss Reduced Phase rule equation	2	06
B) Discuss the term Phase & Degree of freedom involved in Phase Rule equation with examples.	1	06
C) Explain the Phase diagram of one component Water system.	2	06
<b>Q.3 Solve Any TWO of the following.</b>		
A) Describe in brief Direct (Dry) chemical corrosion.	1	06
B) Discuss Hydrogen evolution mechanism involved in electrochemical corrosion.	2	06
C) Explain Cathodic protection method to minimize the rate of corrosion.	2	06
<b>Q.4 Solve Any TWO of the following.</b>		
A) What is Coal? Explain various types of coal.	1	06
B) Write a note on: Refining of Petroleum.	2	06
C) Describe any three physical properties of lubricant.	2	06
<b>Q.5 Solve Any TWO of the following.</b>		
A) Write a note on : Glass electrode	2	06
B) Describe Ostwald's theory of Acid-Base indicator.	1	06
C) Describe Conductometric titration with any two examples.	2	06