

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Summer 2023

Date:-14/07/2023

Course: B.Tech.

Subject: Engineering Chemistry

Marks: 60

Sem: II

Subject code: BTBS202

Duration: 3 hr.

Instructions for students:

1. All the questions are compulsory.
2. Draw a neat labelled diagram wherever necessary.
3. Read question properly

Q1 Solve any TWO of the following:	Level/CO	Marks
A) Explain the zeolite process of softening of water with its advantages and disadvantages.	(understanding)	06
B) Explain in detail Hot-Lime Soda process with its advantages and disadvantages.	(understanding)	06
C) How does the Hardness of water determine by EDTA complexometric method.	(Apply)	06
Q2. Q2. Solve any TWO of the following:		
A) State phase rule equation. Explain the term component of phase rule with examples.	(Understanding)	06
B) Explain phase diagram of one component water system with neat labelled diagram.	(Understanding)	06
C) What is meant by Eutectic point? Explain silver-lead 2 component alloy system with phase diagram.	(application)	06
Q3. Solve any TWO of the following:		
A) Write a note on Dry/Chemical corrosion. Explain mechanism of corrosion due to oxygen.	(knowledge)	06
B) B) Suggest the criteria for selection of metal and role of proper designing for corrosion control.	(understanding)	06
C) C) Define Anodic protection method and explain the process with the help of neat labelled diagram.	(knowledge)	06
Q4. Solve any TWO of the following:		
A) Define Calorific value and the concept of Gross and Net calorific value.	(knowledge)	06
B) What are the conditions under which solid lubricants are used and write a note on Graphite.	(application)	06
C) Describe Fractional distillation process with neat labelled diagram and give end use of each fraction.	(Understanding)	06
Q5 Solve any TWO of the following		
A) A) Define Ohm's law, Specific conductance, equivalent conductance, molecular conductance, and cell constant with their units.	(Understanding)	06

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| B) | B) Write a note on Ostwald's theory of acid base indicators. | (knowledge) | 06 |
| C) | C)What is conductometric titration? Explain
conductometric titration of strong acid versus strong base
with graphical representation. | (Application) | 06 |