

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI

First Semester (2023-2024)

Mid Sem Examination (Regular) (Closed Book)

CHE F214 (Engineering Chemistry)

Max Time: 90 mins

Date: 13/10/2023

Max Marks: 90

Instructions: All questions should be answered with clarity and precision. Marks allotted per question are indicated in brackets.

1. In the treatment of water for domestic purpose, discuss the impact if pretreatment and flocculation steps are not present. **[10]**
2. Differentiate between scale and sludge formation regarding boiler troubles. **[10]**
3. Describe the role played by tertiary treatment regarding sewage treatment. **[15]**
4. Differentiate between bulk polymerization and solution polymerization in terms of process and limitations involved. **[15]**
5. Distinguish between solid, liquid, gaseous fuels in terms of chief limitations involved. **[15]**
6. Discuss three chief qualities of a "good" fuel. **[15]**
7. Discuss how membrane softening is better compared to lime softening with clear justification. **[10]**