

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**  
**Winter End Semester Examination – Dec 2019**

**Course: F.Y.B. Tech**  
**Subject: Engineering Chemistry (CHM103/CHM203)**  
**Date: 16/12/2019**

**Sem: I**  
**Marks: 60**  
**Duration: 3 Hr.**

**Instructions to the Student:**

- 1 Each question carries 12 marks.
- 2 Attempt any FIVE questions of the following.
- 3 Illustrate your answers with neat sketches, Diagram etc. Whenever necessary.

		(Level / CO)	Marks
<b>Q.1</b>	Solve <b>Any Two</b> questions of the following.		
	A) Explain Zeolite process of softening of water with its advantages and disadvantages	01	06
	B) Write a note on Biological Oxygen Demand (BOD).	01	06
	C) How does the hardness of water determined by using EDTA method.	01	06
<b>Q.2</b>	Attempt the following questions.		
	A) Explain in detail Phase diagram of Water system	02	06
	B) State Phase Rule equation. Explain the term Phase and Component with suitable examples.	02	06
<b>Q.3</b>	Attempt the following questions.		
	A) Explain the Froth-Flotation & Magnetic separation method for concentration of ore.	03	06
	B) Explain the reduction of ore by Smelting process	03	06
<b>Q.4</b>	Solve <b>Any Two</b> questions of the following.		
	A) Explain Proximate Analysis of Coal.	04	06
	B) Give the classification of fuel and explain characteristics of a good fuel.	04	06
	C) Discuss the type of Lubrication with examples.	04	06
<b>Q.5</b>	Attempt the following questions.		
	A) Explain Synthesis, Physical, Chemical properties and uses of Pyridine.	05	06
	B) How does ethyl alcohol manufacture from molasses by fermentation Process	05	06
<b>Q.6</b>	Solve <b>Any Two</b> questions of the following.		
	A) Write a note on : Conductometric titrations	06	06
	B) Explain Ostwald's theory of acid base indicators.	06	06
	C) Write a note on: Glass electrode.	06	06

Paper End