

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

Course: F.Y. B. Tech

Subject: Engineering Chemistry (CHM1202)

Date: 16/12/2019

Sem: I

Marks: 60

Duration: 3 Hr.

Instructions to the Student:

- All questions are compulsory.
- Use of non-programmable scientific calculators is allowed.
- Each question carries 12 marks.
- Illustrate your answers with neat sketches, Diagram etc. Whenever necessary.

		(Level / CO)	Marks
Q.1	Solve Any Two of the following.		
	A) Explain in detail Hot Lime-soda process with its advantages and disadvantages.	01	06
	B) Explain the determination of Dissolved Oxygen by Winkler's Method.	01	06
	C) Define Hard and Soft water. How does the hardness of water determined by EDTA complexometric method?	01	06
Q.2	Solve Any Two of the following.		
	A) What is Phase Rule? Explain the term Component and Degree's of Freedom with suitable examples.	02	06
	B) Explain in detail Phase Diagram of Water system.	02	06
	C) Describe Phase Diagram of two component Ag-Pb alloy system.	02	06
Q.3	Solve Any One of the following.		
	A) i) Explain electrolytic refining of metal.	03	06
	ii) Discuss the process of Calcination and Roasting of ore.	03	06
	B) Explain Froth-Flotation, Magnetic separation and Gravity separation methods of concentration of ore.	03	12
Q.4	Solve Any Two of the following.		
	A) Discuss the Physical properties of Lubricant.	04	06
	B) Describe the process of determination of % of Carbon, Hydrogen and Sulphur in the coal.	04	06
	C) Explain in detail the process of Refining of Petroleum.	04	06
Q.5	Solve Any One of the following.		
	A) i) Write a note on Conductometric titrations.	05	06
	ii) Write a note on glass electrode.	05	06
	B) Explain in detail Ostwald's and Quinonoid Theory of acid base indicators.	05	12

Paper End