

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY

LONERE, RAIGAD-402103

SUPPLEMENTARY EXAMINATION - SUMMER 2022

Branch: B. Tech

Semester: I & II

Subject with Code: Engineering Chemistry (CHM103/ CHM203)

Marks: 60

Date:

Time: 3 Hrs.

Instructions to the Students:

1. Each question carries 12 marks.
 2. Attempt any FIVE questions of the following.
 3. Illustrate your answers with neat sketches, diagram etc. wherever necessary.
 4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.
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Q. 1 Attempt any TWO questions of the following:

- a) Explain Zeolite Process of softening of water with its advantages and disadvantages. (06)
- b) How does the Hardness of water is determined by EDTA method? (06)
- c) Write note on Chemical Oxygen Demand(COD). (06)

Q.2 a) Write Phase rule equation. Explain the term Phase with examples. (06)

- b) Explain Phase diagram of One Component Water System. (06)

Q.3 a) Write a note on: Electrolytic refining of metal. (06)

- b) Explain Froath Flotation and Magnetic Separation method of concentration of ores. (06)

Q. 4 Attempt any TWO questions of the following:

- a) What are fuels? how are they classified? (06)
- b) Discuss the Proximate analysis of coal. (06)
- c) Explain types of lubrication. (06)

Q. 5 a) How does Ethyl alcohol manufactured from molasses by fermentation process? (06)

- b) Explain Physical, Chemical Properties and Uses of Naphthalene. (06)

Q.6 Attempt any TWO questions of the following:

- a) Describe the method of Conductance measurement by Wheatstone's Bridge. (06)
- b) Write note on Glass Electrode. (06)
- c) Explain in detail Debye-Huckel theory of strong electrolyte. (06)