

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE –  
RAIGAD -402 103

Mid Semester Examination – October - 2017

Branch: F. Y. B. Tech (Group B)

Sem.: - I

Subject with Subject Code:- Engg. Chemistry (CHM103)

Marks: 20

Date:- 4/10/2017

Time:- 1 Hr.

**Instructions:-**All questions are compulsory.

(Marks)

**Que. No. 1 Multiple Choice Questions.**

(06)

- I. For regeneration of Zeolite ----- solution is used.  
a. HCl                      b. NaOH                      c. KCl                      d. NaCl
- II. To remove temporary hardness of water ----- is used.  
a.  $MgCl_2$                       b.  $CaCl_2$                       c.  $Ca(OH)_2$                       d.  $Mg(HCO_3)_2$
- III. If only one Phase is present in one component system then the no of degree of freedom will be -----  
a. 0                      b. 1                      c. 2                      d. 3
- IV. Which indicator is used to determine COD -----,  
a. Starch                      b. ferroin                      c. Methyl orange                      d. none
- V. In Pb-Ag alloy system ----- is the temperature at Eutectic point.  
a.  $303^\circ C$                       b.  $300^\circ C$                       c.  $325^\circ C$                       d.  $350^\circ C$
- VI. In water system, the curve which represent equilibrium between ice and water vapour is called -----,  
a. Vaporisation curve                      b. Sublimation curve                      c. fusion curve                      d. None

**Que. No. 2 Attempt any one of the following:**

(06)

- a.) Define softening of water. Explain Zeolite process of softening of water with its advantages and disadvantages.
- b.) Draw Phase diagram of Sulphur system and explain the curves, areas and triple points in it.

**Que. No. 3 Attempt any two of the following**

(08)

- a.) Write a note on Chemical Oxygen Demand (COD).
- b.) What is Phase rule equation? Explain the term Phase involved in Phase rule equation.
- c.) Explain types of water.

