Government College of Engineering, Amravati

(An Autonomous Institute of Government of Maharashtra)

B. Tech. 1st Year

Class Test-I

Course Code: SHU 202 Max. Marks: 15

Course Name: Applied Chemistry Time: 1Hr

Q.1 Calculate the amount of Lime and Soda required to soften 1 Million litres of water sample containing $Ca(HCO_3)_2$- 162 ppm, Dissolved CO_2-22 ppm, $Mg(HCO_3)_2$- 73 ppm, $CaCl_2$- 111 ppm, $MgSO_4$- 90 ppm and NaCl-58.5 ppm having Purity 80% and 95% respectively. (3 Marks)

Q.2 Give the Difference between Thermosetting and Thermoplastic Polymer. (3 Marks)

Q.3 Give the preparation, Properties and uses of Buna-S Rubber OR Teflon (3 Marks)

Q.4 Write notes on- I) Break Point Chlorination II) Hot Lime Soda Process (3 Marks Each)

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GOVERNMENT COLLEGE OF ENGINEERING, AMRAVATI

(An Autonomous Institute of Govt. Of Maharashtra)

Department of Chemistry

Class Test- I (Sem II 2016-17) **14 Feb 2017**

Course: Applied Chemistry (SHU 202) **Max. Marks: 15** **Time: 1 Hr**

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Q.1. Answer Any four from the following. (Each for 3 marks)

a) Differentiate between Thermosetting and Thermoplastic Polymers?

b) Define Nanochemistry. Give the applications of Nanomaterials.

c) Give the Preparation, Properties and uses of Teflon **OR** Nitrile Rubber.

d) What is mean by Hardness of Water? Explain Demineralization Process of Water.

Q.2. A water sample on analysis show the following impurities. $Ca(HCO_3)_2$=162 ppm, Dissolved CO_2=22 ppm, $Mg(HCO_3)_2$=73 ppm, $CaCl_2$=111ppm, $MgSO_4$=90 ppm, NaCl=58.5 ppm. Calculate the amount of lime (80% pure) and Soda (95% pure) required to soften 1million liters of water using $Al_2(SO_4)_3$ as a coagulant at the rate of 57 ppm. (3 marks)

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CLASS TEST-I

2013

Time-1 hr
Marks-15

B.Tech-I

Course Code :-SHU-202
Course Name:- Applied Chemistry

Q. 1. What is thermosetting polymer? Give the preparation, properties & uses of Bakelite.

OR

What is rubber? Give the preparation, properties and uses of Buna N. 3M

Q.2. what is hardness of water? Explain the Zeolite process? 3M

Q.3. A water sample on analysis, gave the following data: 4M

$MgCl_2$ - 95 ppm
$CaSO_4$ –272 ppm
$MgSO_4$—120 ppm
H_2SO_4 – 49ppm
SiO_2—4 ppm

Calculate the amount of lime (95% pure) & soda (97 % pure) needed for treating 1 million liters of water, if the cost of lime and soda are Rs. 40 and Rs. 2,000 per 100 Kg each respectively. Calculate the total cost of chemical used for treating 1 million liters of water.

Q.4. Short note on any two 5 M

a) Break point chlorination
b) Boiler corrosion
c) Preparation, properties and uses of PVC
d) Phosphate conditioning process.

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24 + 32 + 64
140

22 + 35.5
CF2
CH2-F2

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