**Assignment-I**

**I Year, AICTE Flexible Curricula, Based on CO No. 1**

**Engineering Chemistry**

**(BT-101)**

**Date of giving Assignment sheet:**

**Date of submission of Assignment sheet:**

**UNIT I**

Q.1 Define Hardness. Explain why hard water does not give lather with soap?

Q.2 How can hardness of water be determined by EDTA method?

Q.3 100 mL of a water sample required 25 mL of N/50 H2SO4 for neutralization to phenolphthalein end point. After this, methyl orange indicator was added and further acid required was again 25 mL Calculate type and extent of alkalinity.

**UNIT II**

Q.1 Discuss causes, effects and removal of the following:

a) Scale and sludge

b) Boiler Corrosion

Q.2 Give a comparative account of zeolite and ion exchange method.

Q.3 Calculate the amount of lime and soda required for the softening of 50,000 L of hard water containing MgCO3 = 144 ppm, CaCO3 = 25 ppm, MgCl2 = 95 ppm, CaCl2 = 111 ppm and Na2SO4 = 20 ppm.

**Assignment-II**

**I Year, AICTE Flexible Curricula, Based on CO No. 2**

**Engineering Chemistry**

**(BT-101)**

**Date of giving Assignment sheet:**

**Date of submission of Assignment sheet:**

**UNIT III**

Q. 1 Differentiate between Hydrodynamic and Boundary lubrication

Q.2 How can we determine the viscosity Index of any sample oil?

Q.3 Describe the testing and significance of the following:

a) Flash and Fire point (by Pensky Marten)

b) Aniline Point.

Q.4 Write a brief note on Solid Lubricant.