**Shah Abdul Latif University Khairpur**

***Institute of Chemistry***

 *M.S Inorganic*

**Class**: M.S /M.Phil. Inorganic Chem **Subject**: Bio-Inorganic Chemistry

 **Semester**: 2nd **Test:** Final test **Session:** 2018 **Date**: 18-10-2018

  **Marks**: 100 **Time:** 1hour

 ***Note:*** *Attempt any three questions.*

QNo.1How elements are classified as essential nonessential and trace elements? Deficiency signs of following elements (i) Zn(ii) Cu(iii) Ca

QNo. 2 What are chelates discuss some areas of medicine in which these are used? Describe therapeutic uses of platinum and lithium and their complexes.

QNo.3 How the metals are storage and transported in biological system? Give the mechanism of sodium/potassium in transportation and storage of sodium and potassium in biological system?