



**CRAWFORD UNIVERSITY**  
**COLLEGE OF NATURAL AND APPLIED SCIENCES**  
**DEPARTMENT OF INDUSTRIAL CHEMISTRY**  
**HARMATTAN EXAMINATION 2021/2022**

**COURSE CODE: ICH 327**

**COURSE TITLE: SPECIAL TOPICS IN INORGANIC CHEMISTRY**

**UNITS: 3**

**TIME ALLOWED: 3HRS**

**DATE: JANUARY 2022**

**INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS.**

1(a) Draw the structures of haemoglobin (6 marks)

(b). Write short notes on the storage of Iron in the body.

2(a) List three proteins that contain iron.

b) List three proteins that contain iron. (7 marks)

3(a) Explain the role of Vanadium and Chromium in the body. (5 marks)

(b) Give five enzymes, the metals present in them and the respective reactions that they catalyze (5 marks)

4a) List five fluids and tissues that contain calcium ions

b) Give the chemical formula of five minerals that contain Calcium ions and identify their respective locations.

5a). Give the equations for the irreversible oxidation of iron(II)-porphyrinato species.

b) Draw the structure of Chlorophyll

6. Write short notes on the following: a) Anaemia. b) Zinc deficiency c) Copper deficiency d) Iron toxicity e) Cadmium and lead toxicity