



CRAWFORD UNIVERSITY
FAITH CITY, IGBESA, OGUN STATE

2023/2024 HARMATTAN SEMESTER EXAMINATIONS

COLLEGE: NATURAL AND APPLIED SCIENCES

DEPARTMENT: BIOLOGICAL SCIENCES

UNIT: BIOCHEMISTRY

COURSE CODE: BCH 417 COURSE UNIT: 2 TIME ALLOWED: 2 HOURS

COURSE TITLE: BIO-INORGANIC CHEMISTRY

INSTRUCTION: ANSWER ANY FOUR QUESTIONS

- 1 Discuss the influence of the following fundamentals of both inorganic chemistry and biochemistry on the function of biomolecules:
 - (a) Oxidation state *5 marks*
 - (b) Coordination numbers and preferred geometries *5 marks*
 - (c) Influence of pH *5 marks*

2. Discuss the roles of elements in biomolecules. Illustrate with specific examples. *15 marks*

- 3 Describe the process of iron binding by transferrin. Illustrate with appropriate diagram(s). *15 marks*

- 4 (a) Write an ESSAY on the O₂-binding affinity of hemoglobin. *10 marks*
(b) Compare and contrast the O₂-binding affinity of hemoglobin and myoglobin *5 marks*

- 5 Describe ferritin, the iron storage protein. *15 marks*

- 6 Explain the significance of metals in medicine. *15 marks*