



International Islamic University Chittagong

Department of Pharmacy

B. Pharm (Hons.) Program

Final Examination

Spring Semester 2022

Course Code: **Pharm-1101**

Course Title: **Inorganic Pharmacy-I**

Time: 2 hours 30 minutes

Full Marks: 50

(Answer of separate groups should be given in separate scripts. Figures on right margin indicate marks)

Group A *(Answer any two questions from the followings)* **Marks: 20**

1. a) Quantum number is the identification numbers of an electron in an atom — explain. 5
- b) What are metalloids? Give example of metalloids. 2
- c) Compare and contrast between groups and periods. 3
2. a) “Oxidation and reduction occurs simultaneously” describe the statement. 3
- b) What is oxidation number? Describe the rules of finding out oxidation number. 3
- c) Find out the oxidation numbers of the following — 4
- i) Mn in KMnO_4 ii) Cr in $\text{K}_2\text{Cr}_2\text{O}_7$ iii) H in H_2SO_4 iii) Cl in HClO_4
3. a) Define hybridization. Illustrate how hybridization can occur? 4
- b) Differentiate between ionic and covalent bonds. 2
- c) Elucidate hydrogen bond with example. Write down the importance of hydrogen bond. 4

Group B *(Answer any three questions from the followings)* **Marks: 30**

4. a) What is ligand? Classify it with example. 3
- b) What is chelation? Write the ideal characteristics of chelating agent. 4
- c) What is coordination number? How to find out coordination number? 3
5. a) Interpret EAN? How EAN is determined? 3
- b) Explain warner theory. 4
- c) Write down the structure of EDTA. Enumerate the application of complexing agent. 3
6. a) Address the use of iodine and chlorine. 3
- b) What is baking soda? Why it is used? 3
- c) Write down the electronic configuration of Ca, K, Cl, F. 2
- d) Illustrate the pharmaceutical use of magnesium hydroxide & calcium gluconate. 2
7. Write short note on — 2.5 × 4
- a) Autooxidation
- b) Metallic bond
- c) Equivalent weight of oxidizing agent
- d) Coordinate covalent bond.