**Class Assignment 7 ( Bioinorganic Chemistry)** 04/22/2021

Name: Max Shi

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**Questions (20 pts):**

**Q1. Name two metalloporphyrins**

Chlorophyll and hemoglobin are two metalloporphyrins.

**Q2. Specify the metal present in the following complexes and the role of these complexes.**

1. Chlorophyll

Magnesium – used to capture energy from sunlight to convert carbon dioxide into carbohydrates.

1. Hemoglobin

Iron – Used to transport oxygen in the blood of the human body.

1. Carboxypeptidase

Zinc – Found in pancreas, used to catalyze reaction of peptides.

1. Cytochrome 450  
   Iron – Catalyzes introduction of oxygen molecules into substrates.

**Q3.** **Give Lewis dot structures and sketch the shapes of the following**. **Write the name of the geommetry.**

1. SeCl4
2. I3-

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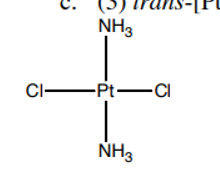
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**Q4.** **Determine the chemical formula for the following compound.**

Potassium pentachloronitridoosmate (VI)

**Q5.** **Determine the point group for the following molecule.**



C2 axis going top down, so principal axis is C2

Perpendicular C2 axes going through NH3 and Cl, so D group

Has mirror plane perpendicular to top down axis, so D2h.