**Assignment: Drugs Acting on the Endocrine System**

1. **Explain the nomenclature and structure of corticosteroids.**
Discuss the general structure of steroids and how specific corticosteroids (Cortisone, Hydrocortisone, Prednisolone, Betamethasone, Dexamethasone) are named based on their chemical modifications.
2. **Describe the stereochemistry of corticosteroids.**
Provide a detailed explanation of how the stereochemistry of corticosteroids influences their biological activity, focusing on key positions in the steroid nucleus that affect drug efficacy.
3. **Metabolism of Corticosteroids: How are they processed in the body?**
Elaborate on the metabolic pathways for corticosteroids like cortisone, hydrocortisone, prednisolone, betamethasone, and dexamethasone. Include details on oxidation, reduction, and hydroxylation.
4. **Compare and contrast the pharmacological actions of Cortisone, Hydrocortisone, Prednisolone, Betamethasone, and Dexamethasone.**
What are the key differences in their therapeutic uses and potency?
5. **Discuss the clinical applications of corticosteroids.**
Choose two corticosteroids and explain their clinical applications, focusing on how their structure and metabolism affect their use in conditions like inflammation, allergies, and autoimmune diseases.