Dr. Desai's section: 4 questions / 12 points

1. The specific pentasaccharide sequence critical for high anticoagulant activity in heparin is based on the following oligomeric sequence **3 pts**
   A) uronic acid (1→4) glucosamine (1→4) uronic acid (1→4) glucosamine (1→4) uronic acid
   B) glucosamine (1→4) uronic acid (1→4) uronic acid (1→4) glucosamine (1→4) uronic acid
   C) uronic acid (1→4) glucosamine (1→4) glucosamine (1→4) uronic acid (1→4) uronic acid
   D) glucosamine (1→4) uronic acid (1→4) glucosamine (1→4) uronic acid (1→4) glucosamine

2. Coumarin has a long onset of action because **3 pts**
   A) it inhibits thrombin.
   B) it is a hydrophobic molecule, which takes a long time to enter circulation.
   C) it can exhibit its effect only after active thrombin has been cleared from circulation.
   D) it relies on vitamin K, which is not part of the coagulation cascade and is a slow co-factor.
   E) none of the above.

3. Low molecular weight heparins **3 pts**
   A) contain lower sulfate density than full-length heparin (unfractionated heparin)
   B) contain less heterogeneity and polydispersity than full-length heparin (unfractionated heparin)
   C) have shorter chain length than full-length heparin (unfractionated heparin)
   D) All of the above

4. Identify whether the following statements is true or false. If false, revise the statement to make it true. **3 pts**

   a) The technical term 'anticoagulants' refers to molecules that prevent the formation of platelet plug.

   b) Heparin cannot be administered orally because its high charged density and molecular weight disfavor passage through the hydrophobic GI lining.