1. **Identify whether the following statements are true (T) or false (F).**
   4 pts

   A) Low molecular weight heparins have less number of sulfate groups for every glucosamine and uronic acid disaccharide repeating sequence \*TRUE or FALSE*

   B) Heparin pentasaccharide (or fondaparinux) is not effective in leading to inhibition of thrombin \*TRUE or FALSE*

   C) Heparins require the presence of antithrombin to exhibit their anticoagulant effect \*TRUE or FALSE*

   D) Oral bioavailability of unfractionated heparin is not good because it is a very long polymer \*TRUE or FALSE*

2. **The oral bioavailability of warfarin is good because**
   3 pts

   A) warfarin is a small hydrophobic molecule with some hydrophilicity

   B) warfarin is able to bind to inhibit gastric enzymes, thereby preventing its breakdown in the stomach

   C) warfarin is a small highly charged molecule, which helps transport across the GI lining

   D) none of the above

3. **Anticoagulants are molecules that prevent the formation of**
   3 pts

   A) platelet plug
   B) fibrin
   C) antithrombin
   D) none of the above
4. Which of the following chain(s) is/are expected to exhibit normal anticoagulant activity?

[Circle clearly so that TA is not left in doubt.] 3 pts

A) A heparin chain of ~10 residues containing sequence 1 but lacking sequence 2
B) A heparin chain of ~10 residues containing sequence 2 but lacking sequence 1
C) A heparin chain of ~10 residues containing both sequence 1 and 2
D) A heparin chain of ~10 residues containing neither sequence 1 nor 2
E) A heparin chain of ~10 residues containing sequence 1 only
F) A heparin chain of ~10 residues containing sequence 2 only