

**Dr. Desai's section: Choose one answer from among the available A, B, C, or D answers that best matches or completes the preceding statement. 5 questions / 14 points**

1. The specific pentasaccharide sequence critical for high anticoagulant activity has a composition **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) glucosamine (1→4) uronic acid (1→4) glucosamine
  - C) uronic acid (1→5) glucosamine (1→5) uronic acid (1→5) glucosamine (1→5) uronic acid
  - D) glucosamine (1→5) uronic acid (1→5) glucosamine (1→5) uronic acid (1→5) glucosamine
  
2. Heparin is **3 pts**
  - A) an activator of factor Xa and thrombin
  - B) an inhibitor of antithrombin
  - C) an activator of antithrombin
  - D) none of the above
  
3. Anticoagulant coumarins **3 pts**
  - A) inhibit enzymes involved in the antithrombin-dependent conversion of certain glutamate residues in prothrombin to  $\gamma$ -carboxyl glutamate residues
  - B) inhibit enzymes involved in the vitamin K-dependent conversion of certain glutamate residues in prothrombin to  $\gamma$ -carboxyl glutamate residues
  - C) inhibit enzymes involved in the vitamin K-dependent conversion of certain  $\gamma$ -carboxyl glutamate residues in prothrombin to glutamate residues
  - D) none of the above
  
4. Nitrovasodilators **3 pts**
  - A) probably release nitric oxide in the blood stream
  - B) probably inhibit the release of nitric oxide in the blood stream.
  - C) probably block calcium channels
  - D) none of the above
  
5. Draw the structure of either amyl nitrite or glyceryl trinitrate **2 pts**