This section has 10 questions. Please select a letter that best matches the answer.

1. Circle the systematic name of the following steroid.  
   B:  6-methyl-9\(\alpha\)-fluoro-11\(\beta\)-hydroxy-pregn-4,6-diene-3,20-dione  
   C:  6-methyl-9\(\alpha\)-fluoro-11\(\beta\)-hydroxy-19-nor-pregn-4,6-diene-3,20-dione  
   D:  6-methyl-9\(\alpha\)-fluoro-11\(\beta\)-hydroxy-19-nor-androst-4,6-diene-3,20-dione

2. Draw the structure of the following steroid showing its stereochemistry and substitution pattern.  
   \(6,16\beta\)-dimethyl-estr-1,3,5,6-tetraene-3,17\(\beta\)-diol

3. A key step, targeted by statins, in cholesterol biosynthesis is  
   A: synthesis of acetyl-Coenzyme A  
   B: synthesis of mevalonate  
   C: synthesis of 3-hydroxy-3-methyl-glutaryl Coenzyme A  
   D: none of the above

4. Inhibition of bile re-absorption from the GI tract is the primary mechanism of  
   A: mevastatin  
   B: metformin  
   C: nicotinic acid  
   D: colestipol

5. Circle molecule(s) from below that are expected to possess anti-estrogenic activity (antagonist).  
   Please note: -2 points for every wrong answer circled.
6. Lipoprotein particles are
   A: aggregates of lipoproteins, triglycerides, cholesterol and cholesteryl esters
   B: the main target of all cholesterol reducing therapies
   C: synthesized and metabolized in the liver
   D: all of the above

7. The mechanism of steroid hormone action requires
   A: the dimerization of the steroid – receptor complex
   B: the internalization of hormone response element
   C: the dimerization of hormone response element.
   D: none of the above

8. Circle orally active steroidal hormone(s) from the following synthetic compounds.
   Please note: -2 points for every wrong answer circled.

   ![Chemical Structures]

   10. Identify the primary biologic activity of the following drugs from the choices below. You may skip a letter or use a letter more than once.

   ![Chemical Structures]

   A: anti-hyperlipidemic
   B: androgen agonist
   C: androgen antagonist
   D: estrogen agonist
   E: estrogen antagonist
   F: progestational
   G: progesterone antagonist
   H: mineralocorticoid
   I: anti-inflammatory
   J: oral hypoglycemic
   K: None of the above