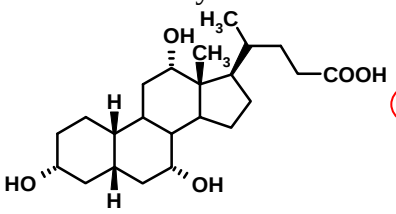
SCHOOL OF PHARMACY
VIRGINIA COMMONWEALTH UNIVERSITY
MEDC 603 Fall 2006 Dr. Desai's Part

Name KEY _____ **Pledge** _____
(Signature)

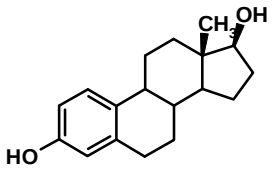
*This section has 10 questions. Please select a letter that **best** matches the answer.*

1. Circle the systematic name of the following steroid. (**3** pts)



A: 3β,7β,12β,-trihydroxy-19-nor-5α-cholan-24-oic acid
B: 3α,7α,12α,-trihydroxy-19-nor-5β-cholan-24-oic acid
C: 3β,7β,12β,-trihydroxy-5α-cholan-24-oic acid
D: 3α,7α,12α,-trihydroxy-5β-cholan-24-oic acid

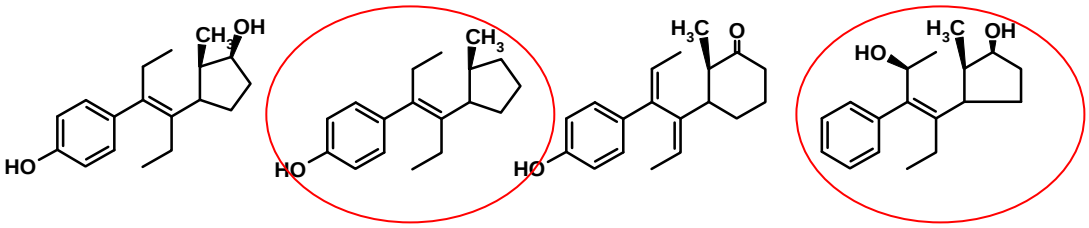
2. Draw the structure of the following steroid showing its stereochemistry and substitution pattern. (**3** pts)
estr-1,3,5-triene-3,17β-diol



3. The protein biosynthesized in our body due to the binding of hydrocortisone to its receptor is (**4** pts)
A: apolipoprotein A1
B: lipocortin
C: HMG CoA reductase
D: phospholipase A2

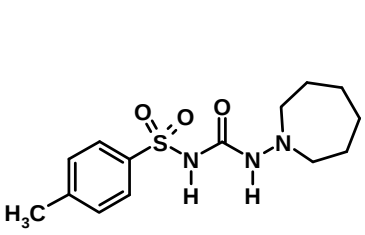
4. Inhibition of α-glucosidase enzyme in the GI tract is the primary mechanism of (**4** pts)
A: mevastatin
B: cholestryamine
C: niacin
D: acarbose

5. Circle molecule(s) from below that are expected to possess anti-estrogenic activity (antagonist). Please note: **-2 points** for every wrong answer circled. (**4** pts)

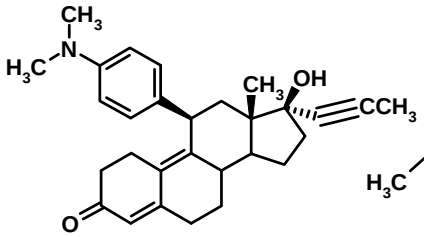


6. A person may not respond to statin therapy because (**3** pts)
A: he possesses a dysfunctional cholesterol biosynthesis gene
B: he possesses a dysfunctional LRP gene
C: he possesses a dysfunctional LDL-R gene
D: none of the above

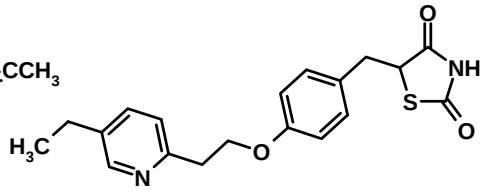
7. The mechanism of steroid hormone action requires (**3** pts)
   - **A**: the dimerization of the steroid – receptor complex in the nucleus
   - **B**: the internalization of hormone response element in the nucleus
   - **C**: the dimerization of hormone response element in the nucleus
   - **D**: all of the above
8. The major reason why troglitazone possesses considerable hepatic toxicity is (**3** pts)
   - **A**: one of its metabolite possess a highly reactive quinone group
   - **B**: one of its metabolite possess a highly reactive carboxylic acid group
   - **C**: one of its metabolite possess a highly reactive pyridine group
   - **D**: none of the above
9. A drug class that is particularly helpful in maintaining an anti-hyperglycemic state, rather than a hypoglycemic state, is (**3** pts)
   - **A**: the sulfonyl ureas
   - **B**: the glitazones
   - **C**: the biguanides
   - **D**: all of the above
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. (**24** points)



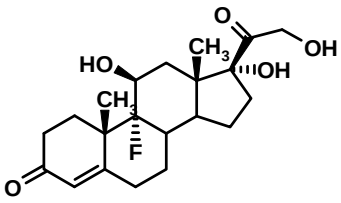
J



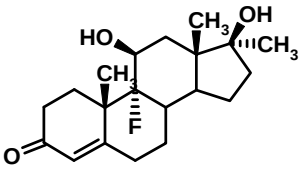
G



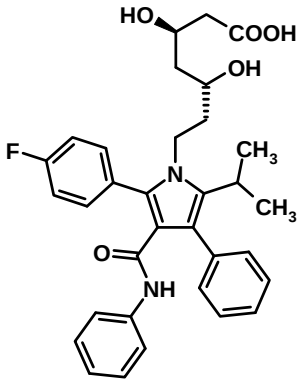
J



I



B



A

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