

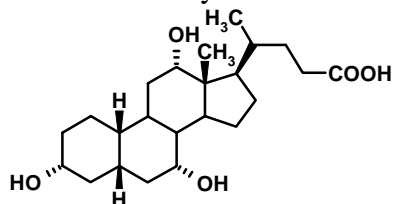
SCHOOL OF PHARMACY
VIRGINIA COMMONWEALTH UNIVERSITY
MEDC 603 Fall 2006 Dr. Desai's Part

Name _____

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

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

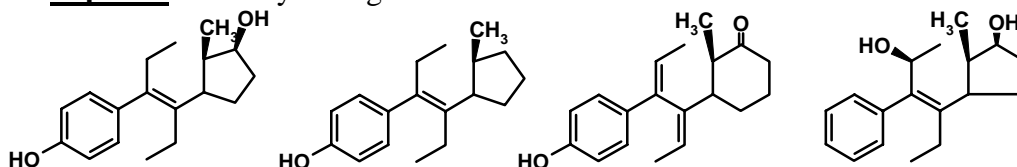
3. The protein biosynthesized in our body due to the binding of hydrocortisone to its receptor is (4 pts)

- 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: cholestyramine
 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)

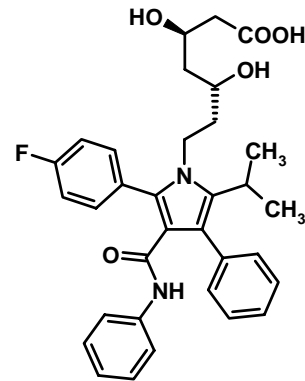
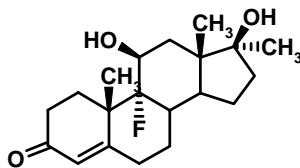
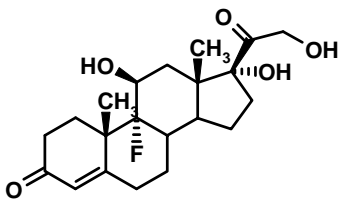
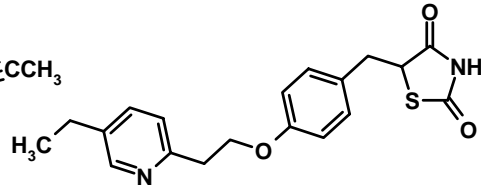
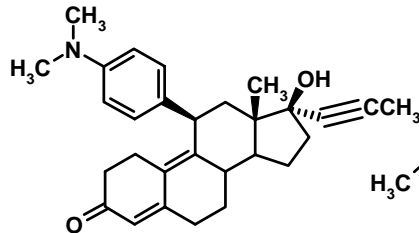
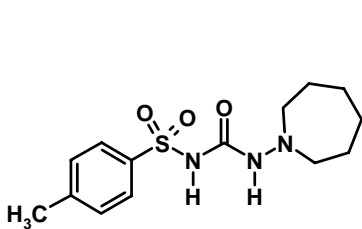


6. A person may not respond to statin therapy because (3 pts)

- 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)



- 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: oral hypoglycemic
 K: None of the above