

Name: \_\_\_\_\_

UFID #: \_\_\_\_\_

**PHA 5127**

**Second Exam**

**Fall 2007**

On my honor, I have neither given nor received unauthorized aid in doing this assignment.

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Name

Put all answers on the bubble sheet

TOTAL \_\_\_\_\_/130 pts

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**Question Set I (True or False)**

(15 points)

**True (A) or False (B). On the bubble sheet mark *A* for true or *B* for false**

Mark whether the following statements as true (A) or false (B). Drug A is cleared only by hepatic metabolism and has an intrinsic clearance of 80,000 L/h

Looking at intrinsic clearance you can tell this is a high extraction drug.

- 1: T F The oral bioavailability of this drug will be larger than 80%.
- 2: T F Plasma protein binding will affect the oral bioavailability of this drug.
- 3: T F The hepatic clearance of this drug is 1333 L/min
- 4: T F Plasma protein binding will affect the hepatic clearance of this drug.
- 5: T F Drug B, known to induce enzymes also responsible for metabolism of Drug A, will significantly affect the clearance of Drug A if given together.

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**Question Set II**

(18 points)

**True (A) or False (B). On the bubble sheet mark A for true or B for false**

Imagine a lipophilic unionized drug A with a volume of distribution of 108 L. When given by an iv bolus injection, the a peak concentration of 0.18  $\mu\text{g}$  is observed ( $C_o$ ). When given orally, the oral bioavailability is 99.9 %. Plasma Protein Binding is 50% ( $f_u=0.5$ ).

Peak [ $\mu\text{g/ml}$ ]	0.18
V [L]	108
F (%)	99.9
$f_u$	0.5

Mark whether the following statements are true (A) or false (B).

This drug is a low extraction drug.  $E=0.001$

- 6: T F The drug is highly metabolized in the liver.
- 7: T F Plasma protein binding will affect the oral bioavailability of this drug.
- 8: T F The hepatic clearance of this drug will be smaller than the  $Cl_{ren}$
- 9: T F Plasma protein binding will affect the hepatic clearance of this drug
- 10: T F Drug B, known to induce enzymes also responsible for metabolism of Drug A will significantly affect the clearance of Drug A
- 11: T F Drug B, known to induce enzymes that are also responsible for metabolism of Drug A is likely to decrease the clearance of A