Examination

1. When a drug is categorized, if studies in animals suggest a potential for harm and controlled studies in women have not been done OR no animal studies or human studies have been done, the drug would be considered:
   a. Category A
   b. Category B
   c. Category C
   d. Category D
   e. Category X

2. Which leprostatic drug is excreted into human breast milk and may result in pigmentation of the skin in the nursing infant?
   a. dapsone
   b. clofazimine
   c. acyclovir
   d. foscarnet
   e. ribavirin

3. Which leprostatic drug has a dose-related risk for causing hemolytic anemia in patients with or without G6PD deficiency?
   a. dapsone
   b. clofazimine
   c. acyclovir
   d. foscarnet
   e. ribavirin

4. Dapsone is excreted into human breast milk. Which of the following pharmacokinetics help the drug accumulate in breast milk?
   a. the low lipid solubility
   b. the weak acid properties
   c. the prolonged serum half-life of the drug
   d. the high protein-binding capacity
   e. the low serum concentration

5. Regarding acyclovir, all of the following are true EXCEPT
   a. it was not found to be teratogenic in pregnant mice, rats, and rabbits at doses resulting in systemic exposures similar to those achieved in humans
   b. the drug readily crosses the human placenta to the fetus
   c. the primary uses of acyclovir during pregnancy have been for the treatment of primary infections of genital herpes simplex virus (HSV) type 2 or for life threatening disseminated HSV infections
   d. the drug is not concentrated in human breast milk, reaching levels that are well below those found in maternal serum
   e. no adverse effects from acyclovir in milk have been reported in nursing infants or in neonates given the drug directly

6. Regarding amantadine, all of the following are true EXCEPT
a. the drug showed dose-related teratogenicity in rats at doses equivalent to the human dose
b. the high molecular weight suggests that amantadine will not cross the placenta
c. birth defects have been observed in humans but the data are very limited
d. small amounts of amantadine are excreted in human breast milk
e. although adverse effects in nursing infants have not been reported, the drug should probably not be used during lactation because of the potential for urinary retention, vomiting, and skin rash.

7. Which antiviral drug is indicated for sight-threatening CMV retinitis where the benefit to the mother may outweigh the unknown fetal risk if this medical problem were to co-exist with pregnancy?
   a. amantadine  
   b. acyclovir  
   c. oseltamivir  
   d. ribavirin  
   e. cidofovir

8. Regarding famciclovir, all of the following are true EXCEPT
   a. it is converted in vivo to the active drug acyclovir  
   b. it is used for the treatment of herpes simplex virus (HSV) type 1 or 2 or varicella zoster infections  
   c. no embryo toxicity or teratogenicity was evident in studies with pregnant rats and rabbits  
   d. the drug was found to be concentrated in the milk of lactating rats  
   e. though no human data are available, because of the risk of carcinogenicity, famciclovir should probably not be used during breast-feeding

9. Which antiviral agent causes frequent renal toxicity in adults so, if used in pregnancy, antepartum testing of amniotic fluid volume to monitor for fetal renal impairment is highly recommended?
   a. oseltamivir  
   b. famciclovir  
   c. amantadine  
   d. foscarnet  
   e. acyclovir

10. Regarding ganciclovir, all of the following are true EXCEPT
    a. it is used in the treatment of CMV retinitis and other viral infections  
    b. the agent is embryo toxic in mice and rabbits at doses very close to those used in humans  
    c. it crosses the human placenta  
    d. the human data are too limited to make an assessment of fetal risk  
    e. the use of ganciclovir during human lactation has been reported and it is considered safe for use

11. Which of the antiviral drugs has a pregnancy risk factor category rating of X?
    a. oseltamivir  
    b. ribavirin  
    c. acyclovir  
    d. foscarnet  
    e. amantadine

12. Which antiviral drug is concentrated in red blood cells and persists for the life of the cell (which is up to 4 weeks)?
    a. ribavirin  
    b. rimantadine  
    c. valacyclovir  
    d. foscarnet  
    e. amantadine
13. Which antiviral agent is converted in vivo to acyclovir?
   a. zanamivir
   b. famciclovir
   c. valacyclovir
   d. cidofovir
   e. ganciclovir

14. All of the following anti-retroviral agents are protease inhibitors EXCEPT
   a. Indinavir
   b. Amprenavir
   c. Nelfinavir
   d. Abacavir
   e. Saquinavir

15. Because of a possible relationship between ______ and diabetes mellitus, pregnant women using these drugs should be monitored for hyperglycemia.
   a. leprostatic agents
   b. amantadine and rimantadine
   c. nucleotide analog reverse transcriptase inhibitors
   d. non-nucleoside reverse transcriptase inhibitors
   e. protease inhibitors

16. Breast-feeding by HIV-positive women is not recommended because
   a. the anti-retroviral drugs were all found to be toxic to the nursing infant
   b. nursing will make the HIV infection harder to treat in the mother
   c. of the risk of transmitting the HIV infection from the mother to the nursing infant
   d. the infant will develop a tolerance to the drugs used by the mother and they will not be effective if needed in the future
   e. the anti-retroviral drugs used by the mother were found to be carcinogenic in the infant

17. All of the following anti-retroviral agents are nucleotide analog reverse transcriptase inhibitors EXCEPT
   a. Zidovudine
   b. Didanosine
   c. Lamivudine
   d. Stavudine
   e. Nevirapine

18. For which two nucleotide analog reverse transcriptase inhibitors has a possible association been suggested between their use and mitochondrial dysfunction in human offspring exposed in utero or postnataally?
   a. stavudine and zalcitabine
   b. lamivudine and zidovudine
   c. indinavir and saquinavir
   d. abacavir and didanosine
   e. nevirapine and delavirdine

19. Which of the following anti-retroviral agents is a non-nucleoside reverse transcriptase inhibitor?
   a. Stavudine
   b. Indinavir
   c. Lamivudine
   d. Efavirenz
   e. Zidovudine
20. Regarding the non-nucleoside reverse transcriptase inhibitors, based on animal reproduction testing ________ appears to be the least toxic.

a. nevirapine  
b. zidovudine  
c. delavirdine  
d. efavirenz  
e. lamivudine