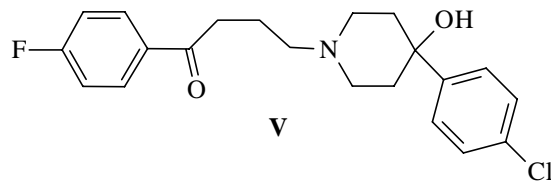
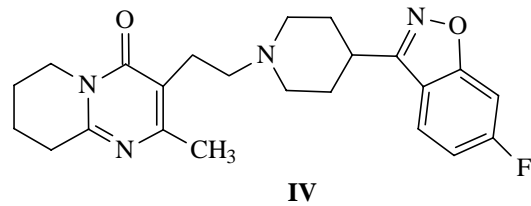
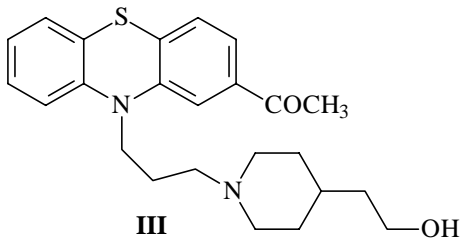
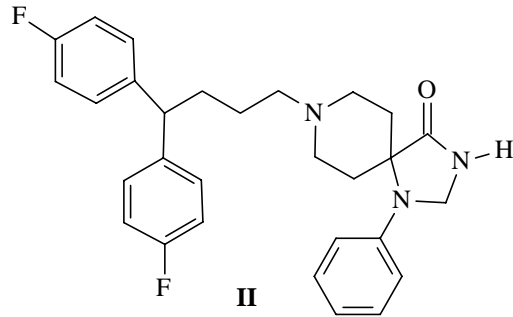
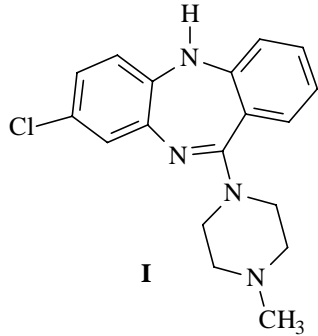


SAMPLE EXAM PROBLEMS KEY: DOPAMINE ANTAGONISTS

Select the best answer for questions X-X below concerning the following antipsychotic drugs (I-V)



1. Which of the drugs shown above (I-V) have significantly lower affinity for dopamine receptors than the piperazine phenothiazines:

The diphenylbutylpiperdines (II), Risperidone type (IV) and butyrophenone type (V) antipsychotics have relatively high DA receptor affinity. The piperidine phenothiazines (III) and clozapine-type (I) antipsychotics have lower affinity relative to the phenothiazine piperazines

- A. All
B. Only I, II, III and IV
C. Only II, II and IV
D. Only I and III
E. Only III and IV

2. Which of the drugs shown above (I-V) are **less likely** to induce extrapyramidal side effects than the piperazine phenothiazines I, III and IV

The clozapine-type (I), piperidine phenothiazines (III) and risperidone type (IV) antipsychotics produce less EPS than butyrophenones (V) and diphenylbutyrophenones (II)

- A. All
- B. I, II, III and IV
- C. I, III and V
- D. I, III and IV**
- E. I and III

2. Which of the drugs shown above (I-V) are **more likely** to produce anti-muscarinic side effects than the piperazine phenothiazines

The clozapine-type (I), diphenylbutyrophenones (II) and piperidine phenothiazines (III) antipsychotics have higher affinity for muscarinic receptors than the risperidone type (IV) or butyrophenones (V).

- A. All
- B. Only I, II, IV and V
- C. Only I, II and III**
- D. Only II and III
- E. Only III

4. Which of the drugs shown above (I-V) are metabolized by oxidative N-dealkylation to yield metabolites with antipsychotic activity comparable to the parent drug? None

Even though some OND metabolites are formed, no antipsychotic drug gives an OND metabolite of activity comparable to the parent (tertiary amine).

- A. All
- B. Only I, III and IV
- C. Only I and III
- D. Only IV
- E. None**

5. Which of the drugs shown above (I-V) are **more likely** to produce sedation than the piperazine phenothiazines:

This question should have read "more likely to produce sedation". The clozapine-type (I), diphenylbutyrophenones (II) and piperidine phenothiazines (III) antipsychotics have higher affinity for receptors involved in sedation than the risperidone type (IV) or butyrophenones (V).

- A. All
- B. Only I, II, IV and V
- C. Only I, II and III**
- D. Only II and III
- E. Only III

6. Which of the drugs shown above (I-V) have the appropriate functionality to be converted to lipophilic ester prodrugs for IM administration?

Only those antipsychotic derivatives with a free OH to be formulated as an ester!

- A. All
- B. Only II, III and V
- C. Only III and V**
- D. Only IV and V
- E. Only III

7. Which of the drugs shown above (I-V) have more than one nitrogen atom that is protonated at physiologic pH (assume pH 7)

While all of these compounds contain one basic, tertiary amino group (required for activity), none of these compounds contain more than one nitrogen atom that is sufficiently basic to be protonated at physiologic pH

- A. Only I, II, III and IV
- B. Only I, II and III
- C. Only II and IV
- D. Only II
- E. None**