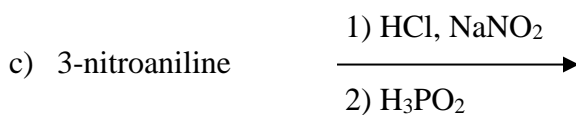
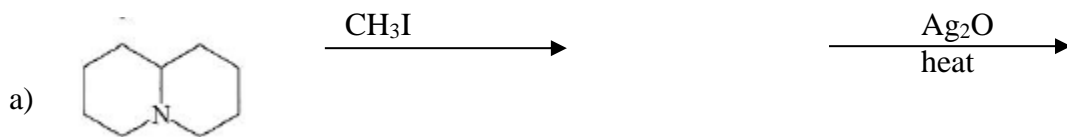
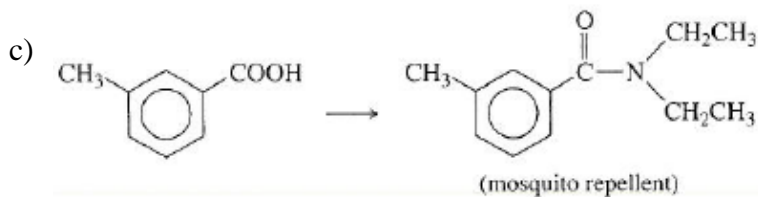
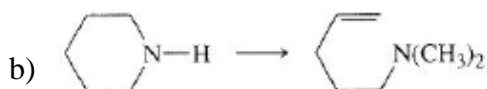
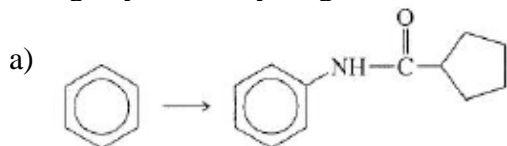


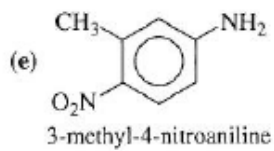
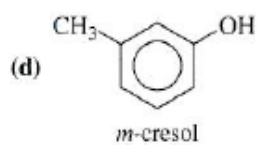
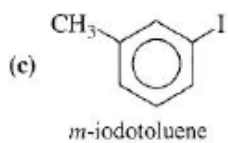
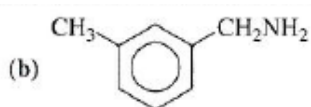
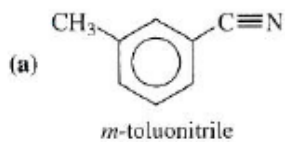
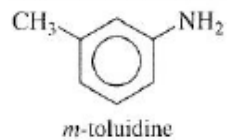
1) What are the products of the following reactions?



2) Using any necessary reagents, show how you will accomplish the following synthesis.



3) Show how *m*-toluidine (shown on the right) can be converted to the following compounds using any necessary reagents.



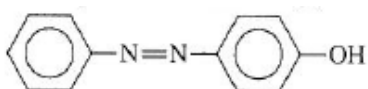
4) Show how you will make the following compounds using diazonium salts from benzene.

a) m-bromobenzoic acid

b) o-chlorophenol

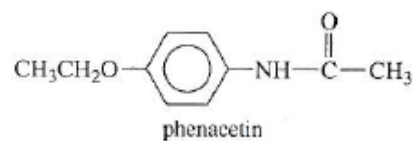
c) m-iodomethylbenzoate

5) Show how you would make the two benzene derivatives separately before you do the coupling reaction.

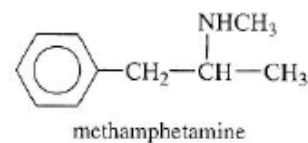


6) The following drugs are synthesized using the methods in this chapter and in previous chapter. Devise a synthesis for each drug using benzene as your starting material.

a) Phenacetin, used with aspirin and caffeine in pain-relief medications.



b) Methamphetamine, once considered a safe diet pill, but now known to be addictive and destructive to brain tissue.



c) Dopamine, one of the neurotransmitters in the brain. Parkinson's disease is thought to be the result of a dopamine deficiency.

