Pericyclic Reactions, Polymers, Drugs: Additional Practice problems:

Textbook 29 (2-7, 23(a,b,c,d,e), 24)
Textbook 28 (4, 16, 18, 24 (a,b), 27(b,d), 28)
Textbook 30 (just read and enjoy Paula's presentation of this topic)

1) Draw the molecular orbital diagram for 1,3,5 hexatriene that shows all three π and all three π^* orbitals.

2) Consider cyclization of (2E,4Z,6E) octatriene. Using the MO symmetry argument, show that under thermal condition the product is cis-5,6-dimethyl-1,3-cyclohexadiene.

3) I expect that you are able to arrive to a correct product either by writing out the Mos and using the symmetry argument or memorizing the Woodward-Hoffmann rules for electrocyclic reactions.

4) Radical polymerization ends in a chain termination reaction. Write a chain termination reaction in which tow long reactive chains of polyethylene react with each other.

5) Write the structure of salicylic acid and aspirin. What property of salicylic acid makes it unsuitable as a drug?