1. b) The mixture will melt over a broad temperature range below 94°C.

2. C

3. enantiomers: 1 and 4; diastereomers: any other pair

4. O
   \[
   \begin{array}{c}
   \text{CH}_3 \text{CNH}_2
   \end{array}
   \]

5. O
   \[
   \begin{array}{c}
   \text{CH}_3
   \end{array}
   \]

6. PCC

7. O
   \[
   \begin{array}{c}
   \text{OCH}_3
   \end{array}
   \]

8. c)
   \[
   \begin{array}{c}
   \text{SO}_3 \text{H}
   \end{array}
   \]

9. anti-aromatic; aromatic; aromatic; aromatic
10. Label each reaction as an oxidation, a reduction, or neither.
   a) neither
   b) reduction
   c) neither
   d) oxidation

11. ![Chemical Structure]

12. 

13. d) 
   ![Chemical Structure]

14. a) 
   b) 
   c)