1. Identify the structure of the product and its stereochemistry, if any, in the following sigmatropic rearrangements. (2 x 5 = 10 marks)

(a) 

(b) 

(c) 

(d) 

(e) 

Optically pure starting material undergoes racemization in the above example.
2. Suggest a mechanism for the following reaction proceeding through a pericyclic pathway.

\[ 2 \times 5 = 10 \text{ marks} \]

(a) 

(b) 

(c) 

(identify the stereochem in the product)

(d) 

(e) 

(END of Assignment)