

Practice exam questions for Chapter 7: Organic Chemistry: the basics (Write-on version)

Question 1 (Bursary 2003 Question 1: modified)

The amino acid glycine can be drawn as $\text{H}_2\text{N}-\text{CH}_2-\text{COOH}$.

a i Name the TWO functional groups present in the molecule. A

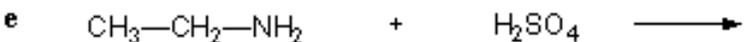
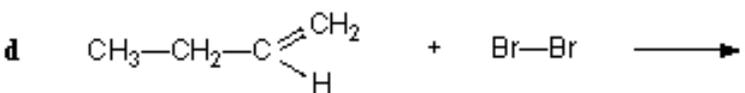
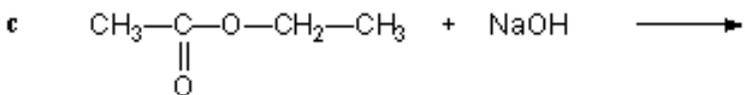
1 _____ 2 _____

ii Give the systematic name for glycine. A

b State why glycine does not have optical isomers (enantiomers). A

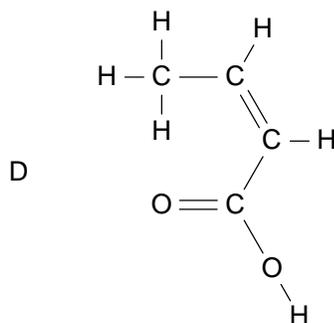
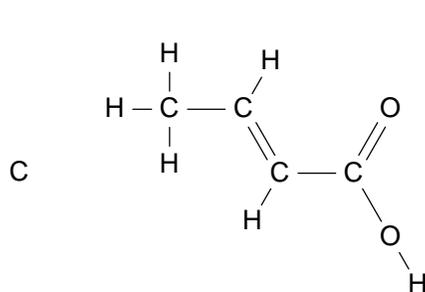
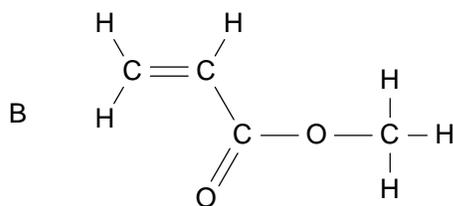
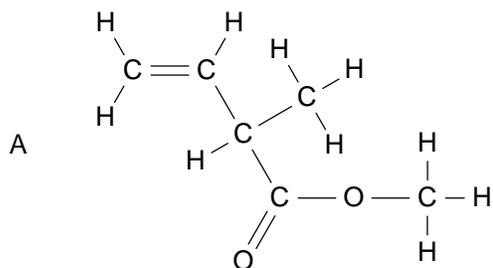
Question 2 (Bursary 1994 Question 5: modified)

Complete the following equations, in each case **naming** the organic products and stating the **type** of reaction undergone.



Question 3 (Bursary 1994 Question 4: modified)

The following structural formulae provide examples of different types of isomerism.



Select from the structures A to D:

- a** two that are structural isomers _____
- b** two structures that are geometrical isomers _____
- c** one structure that would rotate the plane of polarised light _____