EXTENDED PROTON NMR QUESTIONS

1. The proton nmr spectrum of a molecule shows the following peaks:



Peaks A and C disappear on shaking with D2O.

The relative intensities of the four peaks are 1:1:1:3 respectively.

Can you identify the molecule?

1. The proton nmr spectrum and mass spectrum of a molecule are shown below:



The peak at 11.4 in the proton nmr spectrumdisappears on shaking with D2O

The relative intensities of the six peaks are, from left to right, 1:1:1:1:1:3.

Can you identify the molecule?

1. Identify the two molecules A and B, giving reasons for your answer:



 proton nmr spectrum of A proton nmr spectrum of B

 (relative peak areas 2:3:3) (relative peak areas 3:2:3)