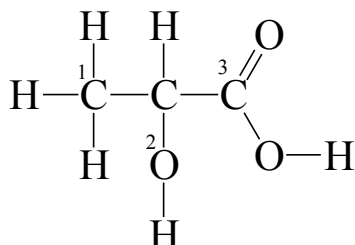


- The partial Lewis structure of lactic acid, the molecule that forms in muscle during exercise, is shown below. Complete the Lewis structure of lactic acid by drawing the non-bonded electron pairs around the relevant atoms.

Marks
7

2



Complete the following table.

2

Atom	Geometric arrangement of the groups around the atom	Hybridisation of atom
^1C		
^2O		
^3C		

Name three types of intermolecular interactions expected of lactic acid.

3

The pK_a of lactic acid is 3.08 and the pK_b of ammonia is 4.76. Determine whether products or reactants are favoured in the following equilibrium reaction. Provide a brief rationale for your answer.

