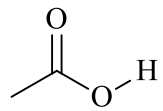
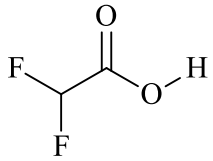
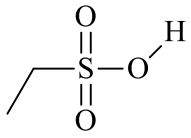
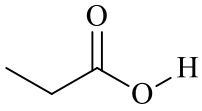
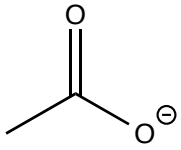
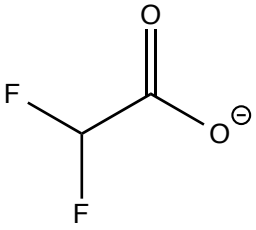
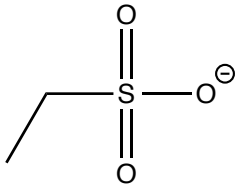
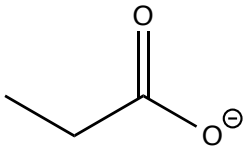
Marks 5

- Draw the conjugate bases for the following acids.

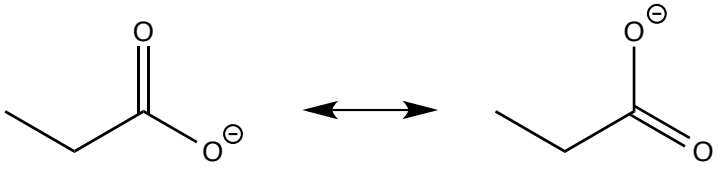
S	**T**	**U**	**V**
			
Conjugate base of **S**	Conjugate base of **T**	Conjugate base of **U**	Conjugate base of **V**
			

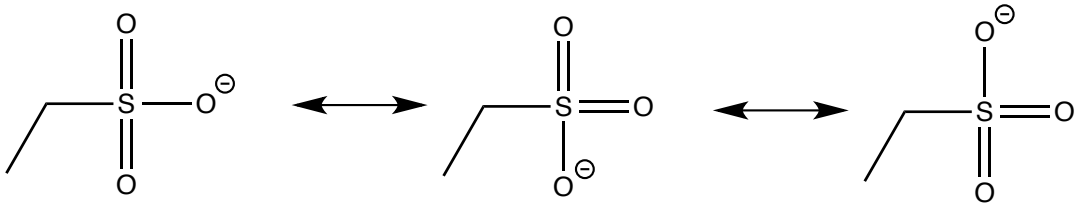
Which of **S** and **T** is the stronger acid? Give a reason for your answer.

T will be a stronger acid. In acting as an acid, the conjugate base will be formed. The conjugate base of T is more stable than that of S as the electronegative fluorine atoms will withdraw electron density from the negatively charged O atom.

Which of **U** and **V** is the stronger acid? Give a reason for your answer.

U is a stronger acid than V because the conjugate base is more stable. Both are stabilised by resonance which acts to delocalise the negative charge over the electronegative O atoms present:





For the conjugate base of U, the negative charge is delocalised over 3 O atoms. For the conjugate base of V, the negative charge is only delocalised over 2 O atoms