A reaction mechanism shows the individual steps that take place during a reaction.

(a) Methane reacts with bromine in the presence of ultraviolet radiation to form several products. Two of these products are bromomethane and hydrogen bromide.		
	(i)	Write an equation for the reaction between methane and bromine to make bromomethane and hydrogen bromide.
		[1]
	(ii)	Name one other bromine-containing organic product which is formed when methane reacts with bromine.
		[1]
(	(iii)	The mechanism for this reaction is called radical substitution.
		Describe the mechanism for the radical substitution of methane by bromine to make bromomethane.
		Use the mechanism to suggest why a small amount of ethane is also formed.
		In your answer, you should organise your answer and use the correct technical terms.