Q1.		Propene reacts with bromine by a mechanism known as electrophilic addition.					
	(a)	Explain what is meant by the term electrophile and by the term addition.					
		Electrophile					
		Addition					
			(2)				
	(b)	Explain why bromine, a non-polar molecule, is able to react with propene.					
	(2)						
			(2)				
	(c)	Outline the mechanism for the electrophilic addition of bromine to propene. Give the name of the product formed.					
		Mechanism					
		Name of product	(5)				
	(ما/	The polymerication of propose to form poly/propose) is an important industrial					
	(d)	The polymerisation of propene to form poly(propene) is an important industrial process.					

Q2. Summarised directions for recording responses to multiple completion questions A (i), (ii) and (iii) Only (ii) and (iii) only (ii) and (iv) only (iv) alone Isomers of the ester HCOOCH ₂ CH ₂ CH ₃ , include (i) ethyl ethanoate (ii) methyl propanoate (iii) butanoic acid (iv) butyl methanoate (Total 1 mail Q3.The number of structural isomers of C ₂ H ₂ CI ₆ is A 2 B 3 C 4 D 5		Name the type	of polymerisation inv	olved.		
Summarised directions for recording responses to multiple completion questions A (i), (ii) and (iii) only (ii) and (iv) only (iv) alone Isomers of the ester HCOOCH2CH2CH3, include (i) ethyl ethanoate (ii) methyl propanoate (iii) butanoic acid (iv) butyl methanoate (iv) butyl methanoate (Total 1 mail Q3.The number of structural isomers of C3H2Cl6 is A 2 B 3 C 4 D 5					((Total 10 marks
Summarised directions for recording responses to multiple completion questions A (i), (ii) and (iii) (ii) and (iii) only (ii) and (iv) only (iv) alone Isomers of the ester HCOOCH ₂ CH ₂ CH ₃ , include (i) ethyl ethanoate (ii) methyl propanoate (iii) butanoic acid (iv) butyl methanoate (Total 1 mail Q3.The number of structural isomers of C ₃ H ₂ Cl ₆ is A 2 B 3 C 4 D 5						
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(i), (ii) and (iii) (i) and (iii) only (ii) and (iv) only (iv) alone Isomers of the ester HCOOCH ₂ CH ₂ CH ₃ , include (i) ethyl ethanoate (ii) methyl propanoate (iii) butanoic acid (iv) butyl methanoate (Total 1 mail Q3.The number of structural isomers of C ₃ H ₂ Cl ₆ is A 2 B 3 C 4 D 5	S					ns
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(iii) butanoic acid (iv) butyl methanoate (Total 1 mail Q3.The number of structural isomers of C ₃ H ₂ Cl ₆ is A 2 B 3 C 4 D 5						
Q3.The number of structural isomers of $C_3H_2CI_6$ is A 2 B 3 C 4 D 5						
Q3.The number of structural isomers of C ₃ H ₂ CI ₆ is A 2 B 3 C 4 D 5	(iv)	butyl methanoa	te			
 A 2 B 3 C 4 D 5 						(Total 1 mar
 A 2 B 3 C 4 D 5 						
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B 3 C 4 D 5			ai isomers of C3H2Cl6	IS		
C 4D 5						
D 5						
		J				(Total 1 mar

 $\textbf{Q4.} How many structural isomers, which are esters, have the molecular formula $C_4H_8O_2$?}$

	В	3
	С	4
	D	5 (Total 1 mark)
		(Total i mark)
⊋5.⊦	How m	ny structural isomers, which are aldehydes, have the molecular formula C₅H₁₀O?
	Α	2
	В	3
	С	4
	D	5

(Total 1 mark)

2