

2002 HIGHER SCHOOL CERTIFICATE EXAMINATION
Chemistry

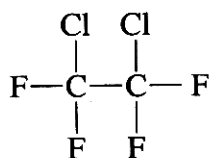
Section I – Part B (continued)

Marks

Question 25 (6 marks)

- (a) What is the systematic name of the CFC in the diagram?

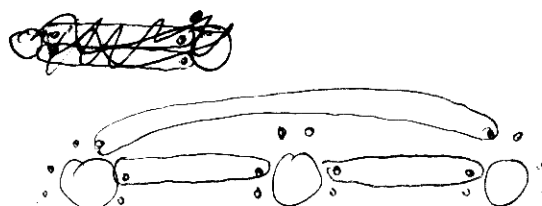
1



..... chloro fluoro carbon

- (b) Identify the bonding within ozone, using a Lewis electron-dot diagram.

2



- (c) Discuss how CFCs damage the ozone layer, using relevant equations.

3

CFCs damage the ozone by in the following way the Cl atom react with O_3 to form $\text{Cl} + \text{O}_3 \rightarrow \text{ClO} + \text{O}_2$. The ClO then reacts again with oxygen which forms $\text{ClO} + \text{O} \rightarrow \text{Cl} + \text{O}_2$. Allowing the Cl another chance to grab a O_3 , repeating the process meaning the ozone continually demolishing and destroying the ozone.