

SMART EXAM RESOURCES
9701 CAMBRIDGE AS CHEMISTRY
TOPIC QUESTIONS AND MARK SCHEMES
TOPIC :ATOMIC STRUCTURE
SUB-TOPIC: ELECTRONIC CONFIGURATION
SET-3-QP-MS

1

Complete the electronic configuration of a chloride ion.

1s² [1]

MARK SCHEME:

2

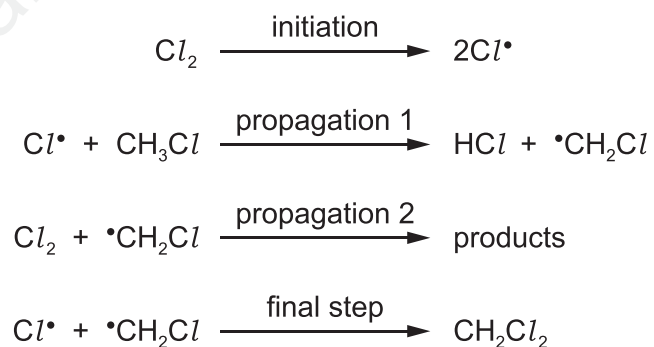
$1s^2 2s^2 2p^6 3s^2 3p^6$	1
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2

Dichloromethane, CH_2Cl_2 , is widely used as an organic solvent.

CH_2Cl_2 can be prepared by reacting CH_3Cl and Cl_2 at room temperature.

The reaction proceeds via several steps, as shown.



Give the electronic configuration of $\text{Cl}\cdot$.

$1s^2$ [1]

MARK SCHEME:

4

(1s ²) 2s ² 2p ⁶ 3s ² 3p ⁵	1
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3Give the full electronic configuration of $S^{2+}(g)$.

..... [1]

MARK SCHEME:

6

$1s^2 2s^2 2p^6 3s^2 3p^2$	1
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4 State the electronic configuration of a copper atom.

1s² [1]

MARK SCHEME:

8

$(1s^2) 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^1$ OR $(1s^2) 2s^2 2p^6 3s^2 3p^6 4s^1 3d^{10}$	1
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5State the full electronic configuration of an atom of ${}_{12}^{25}\text{Mg}$.

..... [1]

MARK SCHEME:

10

$1s^2 2s^2 2p^6 3s^2$	1
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