

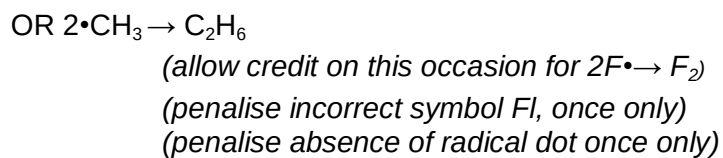
Name of the Student: _____

Max. Marks : 10 Marks

Time : 10 Minutes

Mark Schemes

Q1.



[5]

Q2.

M1: uv light/sunlight

OR

T = 450 °C to 1000 °C;

(do not credit "high temperature")

(ignore references to pressure or catalyst)

(penalise M1 if aqueous chlorine OR chlorine water)

(credit M1 if the condition appears over the arrow of the initiation step)

1

M2: $\text{Cl}_2 \rightarrow 2\text{Cl}\cdot$;

(credit correct half arrows, but penalise (once in the question) the use of double headed arrows)

1

M3: $\text{C}_2\text{H}_6 + \text{Cl}\cdot \rightarrow \text{CH}_3\text{CH}_2\cdot + \text{HCl}$;

(credit CH_3CH_3 for ethane and $\text{C}_2\text{H}_5\cdot$ for the ethyl radical)

1

M4: $\text{CH}_3\text{CH}_2\cdot + \text{Cl}_2 \rightarrow \text{C}_2\text{H}_5\text{Cl} + \text{Cl}\cdot$;

1

M5: $\text{CH}_3\text{CH}_2\cdot + \text{CH}_3\text{CH}_2\cdot \rightarrow \text{C}_4\text{H}_{10}$;

(penalise the absence of dots once only in this question)

(penalise subsequent ionic reactions as contradictions for each reaction contradicted)

(if neither M3 nor M4 scored, allow $\text{CH}_3\text{CH}_2\cdot + \text{Cl}\cdot \rightarrow \text{C}_2\text{H}_5\text{Cl}$ for one mark)

1

[5]