**Name of the Student**:_____
**Max. Marks : 14 Marks** **Time : 14 Minutes**

Mark Schemes

**Q1.**

| Question number | Answer | Mark |
|---|---|---|
| | ☒ D sublimating<br><br>A is incorrect because it describes a change of state from gas to liquid.<br>B is incorrect because it describes a change of state from liquid to solid<br>C is incorrect because it describes a change of state from solid to liquid | **(1)**<br>**AO1** |

**Q2.**

| Question number | Answer | Additional guidance | Mark |
|---|---|---|---|
| | An explanation that combines identification – improvement of the experimental procedure (1 mark) and justification/reasoning which must be linked to the improvement (1 mark):<br><br>• place the beaker on an insulator (1)<br>• so this (material) will reduce rate of energy transfer (1)<br>or<br><br>• wrap the beaker in an insulator (1)<br>• so this (material) will reduce the rate of energy transfer (1)<br>or<br><br>• reduce the surface areas of the water (1)<br>• to give less evaporation (1) | allow named insulator, e.g. cork mat<br><br>put a lid on the beaker/make the beaker taller and narrower | **(2)** |

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**Q3.**

| | Answer | Acceptable answers | Mark |
|---|---|---|---|
| | ☒ **C** (graph C) | | **(1)** |

**Q4.**

| | | Indicative Content | Mark |
|---|---|---|---|
| **QWC** | * | An explanation including some of the following points:<br>particles in gas<br>• move rapidly<br>• throughout container<br>• collide with each other<br>• collide with walls/lid of container<br>• exerting a forceparticles in solid<br>• in fixed positions<br>• vibrate<br>• do not reach lid | **(6)** |
| **Level** | **0** | No rewardable content | |
| **1** | **1 - 2** | • a limited explanation e.g. particles in the copper do not touch the lid / particles in the oxygen do touch the lid.<br>• the answer communicates ideas using simple language and uses limited scientific terminology<br>• spelling, punctuation and grammar are used with limited accuracy | |
| **2** | **3 - 4** | • a simple explanation e.g. particles in a gas can move freely and collide with the lid<br>• the answer communicates ideas showing some evidence of clarity and organisation and uses scientific terminology appropriately<br>• spelling, punctuation and grammar are used with some accuracy | |
| **3** | **5 - 6** | • a detailed explanation e.g. particles in a gas can move freely and collide with the lid but particles in a solid vibrate about fixed positions so cannot reach the lid | |

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| | | |
|---|---|---|
| | | • the answer communicates ideas clearly and coherently uses a range of scientific terminology accurately<br>• spelling, punctuation and grammar are used with few errors |

**Q5.**

| Question Number | Answer | Acceptable answers | Mark |
|---|---|---|---|
| **(i)** | solid<br><br>liquid | in either order<br><br>plasma as an alternative to either. | **(2)** |

| Question Number | Answer | Acceptable answers | Mark |
|---|---|---|---|
| **(ii)** | **C** temperature of the gas measured in Kelvin | | **(1)** |

**Q6.**

| **Question number** | **Answer** | **Mark** |
|---|---|---|
| | **C** vibrate about fixed positions move freely | **(1)** |

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