Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic: Particle Model Of Matter (Low Demand)

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Name of the Student:_____
Max. Marks : 18 Marks **Time : 18 Minutes**

Mark Schemes

Q1.

(a) **Level 3 (5–6 marks):**
A clear, logical explanation containing accurate ideas presented in the correct order with links between ideas.

Level 2 (3–4 marks):
Key ideas presented with some linked together to form a partial explanation.

Level 1 (1–2 marks):
Fragmented ideas, some may be relevant, insufficient links to form an explanation.

0 marks:
No relevant content.

Indicative content

- current in the wire causes heating
- increases temperature of the metal wires / ice

Solid

- arrangement of particles is regular
- particles vibrate about a fixed position

Melting

- internal energy of the ice increases, increasing the temperature to melting point
- so (as the temperature increases) particles vibrate faster
- eventually particles vibrate fast enough to break free from the (strong) bonds
- therefore the arrangement of particles becomes irregular

Liquid

- arrangement of particles is irregular
- particles movement (translational) is random

6

(b) The current in the heating element

1

The mass of ice

1

(c) latent heat of fusion

1

45 / 120 = 0.375

1

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0.38

*allow 0.38 with no working shown for **2** marks*
*allow 0.375 with no working shown for **1** mark*

1

[11]

Q2.

(a) dependent

1

(b) (probe) C

allow 103.2

1

largest difference between reading and actual temperature

reason only scores if C chosen
accept larger
it is 3.2 greater is insufficient
comparing C with only one other probe is insufficient

1

(c) (i) 12(°C)

accept a value between 12.0 and 12.2 inclusive

1

(ii) 140 (seconds)

accept an answer between 130 and 150 inclusive

1

<u>temperature</u> starts to rise

only scores if time mark awarded
accept the <u>temperature</u> was lowest (at this time)

1

(iii) increase

accept faster (rate)

1

[7]

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