Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic : 14_Particle model

Name of the Student:_____
Max. Marks : 17 Marks **Time : 17 Minutes**

Mark Schemes

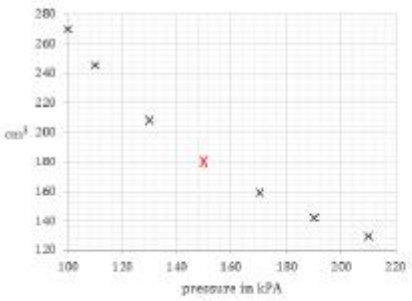
Q1.

Question Number:	Answer	Additional guidance	Mark
(i)	a description to include 3 of the following: gas particles/molecules/atoms are continually in motion (1) collide /hit/bombard (1) with the (sides/walls) of the container (1) (gas particles) exert force (on the side of the container) (1)	 allow cylinder /glass	(3) AO 1 1

Question Number:	Answer	Additional guidance	Mark
(ii)	pressure (of gas) increases (1)		(1) AO 1 1

Question Number:	Answer	Additional guidance	Mark
(iii)	more (frequent) collisions (of particles with walls) (1)	 accept particles move closer together particles move faster	(1) AO 1 1

Q2.

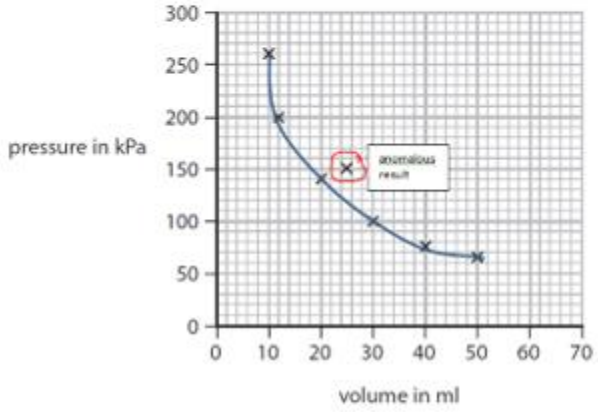
Question	Answer	Additional guidance	Mark
(i)	point plotted at 150,180 (1)	± half a square 	**(1)** **AO3.1**

Question	Answer	Additional guidance	Mark
(ii)	smooth curve through the points (1)	smooth curve through/touching at least 5 crosses ignore slight shakiness in drawing do not accept tramlining (multiple curves)	**(1)** **AO3.1**

Question	Answer	Additional guidance	Mark
(iii)	224 ± 4 (cm^3) (1)	any number between 220 and 228 inclusive	**(1)** **AO3.1**

Question	Answer	Mark
(iv)	**C** 20 °C ***A*** *is incorrect as it is 253 K* ***B*** *is incorrect as it is 273 K* ***D*** *is incorrect as it is 546 K*	**(1)** **AO1.1**

Q3.

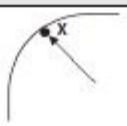
Question Number	Answer	Additional guidance	Mark
			(2)
(i)	anomalous point (1)	ringed or other indication	
(ii)	curve touches one part of the cross for each of the points, excluding the anomalous point (1)	ignore curve beyond 260 kPa and beyond 50ml	

Question Number	Answer	Additional guidance	Mark
(iii)	A description that combines the following points the line will be higher (1) have a similar shape (1)	 Allow for one mark all data will be higher allow the pressure will be higher for the same volume for 2 marks allow the volumes will be higher for the same pressure for 2 marks	(2)

Q4.

Question Number	Answer	Mark
	A melting **A** is the only correct answer. **B** is incorrect because the change from solid to liquid is not freezing. **C** is incorrect because the change from solid to liquid is not evaporation. **D** is incorrect because the change from solid to liquid is not condensation.	**(1)**

Q5.

Question number	Answer	Additional guidance	Mark
	 ☐ C B and D are incorrect because they are not normal to the surface A is incorrect because the force should act outwards		**(1)**

Q6.

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

Q7.

Question Number	Answer	Mark
(i)	**B** increase | increase **B** is the only correct answer. **A** is incorrect because as the pressure of the gas increases the number of particles colliding with the walls of the container does not stay the same. **C** is incorrect because as the pressure of the gas decreases the number of particles colliding with the walls of the container does not stay the same. **D** is incorrect because as the pressure of the gas decreases the number of particles colliding with the walls of the container does not increase.	(1)