Mark scheme - Pressure

Question			Answer/Indicative content	Marks	Guidance
1			**C** ✓	1 (AO1.1)	
			Total	**1**	
2			**B** ✓	1 (AO1.2)	
			Total	**1**	
3			**C** ✓	1(AO2.1)	
			Total	**1**	
4			D	1	
			Total	**1**	
5			C	1	
			Total	**1**	
6		i	**FIRST CHECK THE ANSWER ON ANSWER LINE** **If answer = 100 (Pa) award 3 marks** pressure = force ÷ area ✓ = 10 ÷ 0.1 ✓ = 100 (Pa)✓	3 (AO1.2) (AO2.1) (AO2.1)	**<u>Examiner's Comments</u>** Many candidates were not able to recall the equation *P* = *F/A*. Some candidates did recall the equation and correctly calculated the pressure in the fluid as 100 Pa. A common misconception was using the equation *P* = *F* × *A* to calculate the pressure as 1 Pa.
		ii	at right angles/perpendicular/90° (to the plunger)	1 (AO1.1)	**ALLOW** to the left opposite to the force from the plunger **<u>Examiner's Comments</u>** Many answers here bore no relationship to the diagram: Any clear indication of direction including 'left' or 'at right angles' or 'perpendicular/90° to the plunger' were accepted. Ambiguous and inappropriate directions such as 'to the east' were not credited.
			Total	**4**	
7	a		Doubled ✓ Doubled ✓	2 (AO1.1 x 2)	
	b		**Any two from:** As temperature increases, pressure increases / AW✓	2 (AO1.1.x 2)	**ALLOW** higher temperature means bigger

			Linear /straight line relationship ✓		pressure **DO NOT ALLOW** *T* & *P* in wrong order **DO NOT ALLOW** (directly) proportional relationship **ALLOW** pressure goes up at the same rate as temperature
			Higher temperature means more (frequent) collisions (between particles and container) / AW✓		**IGNORE** idea of more collisions with other particles
			Total	**4**	