

01. 0625_w23_ms_43 Q: 1

Question	Answer	Marks
(a)	(oil) stays on surface / floats on the water	B1
	(oil has) lower density than water OR liquids of lower density float on liquids of higher density	B1
(b)(i)	measure (initial) volume of liquid / water AND immerse object OR immerse object in a known / measured volume of liquid / water	B1
	subtract initial / start volume from final / new volume OR calculate the difference in volume OR measure change in volume	B1
	OR (alternative answer)	
	fill displacement can / container with water AND immerse object	(B1)
	measure volume of displaced water	(B1)
(b)(ii)	220 g	A3
	$\rho = m / V$ OR $(m =) \rho V$ OR 2.7×83	C1
	$(m =) 2.7 \times 83$ OR 2.2×10^n	C1

02. 0625_s21_ms_42 Q: 1

	Answer	Mark
(a)	same (as density of surrounding air)	B1
(b)(i)	falls	B1
(b)(ii)	volume decreases	B1
	density increases	B1
(c)(i)	starts at origin	B1
	finishes horizontal by eye	B1
	gradient decreasing smoothly to 0	B1
(c)(ii)	10 m / s^2 (down)	B1
	0 ignore any unit	B1

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03. 0625_s17_ms_43 Q: 3

(a)	$(\rho =) \frac{m}{V}$ OR $180 \div 210$ OR $0.18 \div 210$	C1
	0.86 g / cm^3	A1
(b)	floats OR words to the same effect	B1
	density of wood is less than density of liquid	B1
Total:		4