Mark scheme

Pressure in liquids

Physics 0625 · Questions from Paper 1, Paper 2 and Paper 4

Total marks

22

MARKS FOR EACH QUESTION

1	2	3	4	5	6	7	8	9	10	Total
1	1	1	1	1	1	1	1	7	7	**22**

Question 1 **[1]**

Answer B

Question 2 **[1]**

Answer D

Question 3 **[1]**

Answer C

Question 4 **[1]**

Answer A

Question 5 **[1]**

Answer C

Question 6 **[1]**

Answer A

Question 7 **[1]**

Answer B

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Question 8 [1]

Answer C

Question 9 [7]

9	**(a)**	**(i)**	($W = mg$ =1440 × 10 =) 14 400 N	B1
		(ii)	(P =) F/A OR 14 400 / (1.5 × 1.2)	C1
			8000 Pa OR N / m^2	A1
	(b)	**(i)**	(P =) $h\rho g$ OR 1.4 × 1000 × 10	C1
			14 000 Pa OR N / m^2	A1
	(b)	**(ii)**	pressure on base of **P** smaller / **Q** greater	M1
			(with same volume removed) smaller decrease in depth in Q OR height in **Q** is greater	A1

[Total: 7]

Question 10 [7]

10(a)	average/overall/combined density (of the metal and air contained) less (than density of sea water)	**1**
10(b)	(P =) $h \times \rho \times g$ **OR** (V=) $A \times l$ in any form	**1**
	(P= 1.2 × 1020 × 10 =) 12 000 (Pa) **OR** (V= 0.8 × 1.2 =) 0.96 (m^3)	**1**
	$P = F \div A$ **OR** (F =) $P \times A$ **OR** (W =) $V \times \rho \times g$	**1**
	(F = 12240 × 0.80 =) 9800 N **OR** (F = W =) 9800 N	**1**
10(c)	same numerical answer as **(b)**	**1**
	resultant/net (vertical) force = 0 **OR** downward force = upward force **OR** forces are balanced	**1**

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