

## Mark schemes

**Q1.**

(a)	6	1
(b)	7	1
(c)	6	1
(d)	$\text{C}_2\text{F}_6$	1
(e)	only intermolecular forces are weak	1
(f)	spherical	1
(g)	3	1
(h)	giant structure <i>allow lattice</i>	1
	(of atoms joined by) covalent bonds	1
	each carbon / atom forms four bonds	1
		<b>[10]</b>

**Q2.**

(a) element

1

(b) protons

*allow electrons*

1

neutrons

1

*must be in this order*

(c)

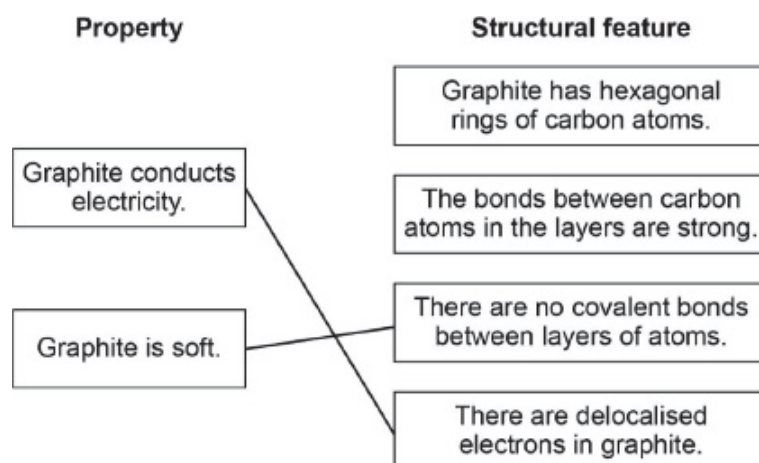
$$\frac{12}{6.02 \times 10^{23}}$$

1

(d) B

1

(e)

*do **not** accept more than **one** line from a box on the left*

2

**[7]**

**Q3.**(a) **C**

1

(b) **D**

1

(c) 4 / four

1

(d) very hard

1

(e)  $\text{C}_2\text{H}_6$ 

1

(f)  $\text{H}^+$ 

1

(g)  $(M_r =) (1 \times 2) + 12 + (16 \times 3)$   
*allow*  $(M_r) = 2 + 12 + 48$   
 $= 62$

2

**[8]**