[10]

## Mark schemes

0	1
W	

(a) 6 1 (b) 7 1 (c) 6 (d)  $C_2F_6$ only intermolecular forces are weak (e) spherical (f) 1 (g) 3 1 (h) giant structure allow lattice 1 (of atoms joined by) covalent bonds 1 each carbon / atom forms four bonds

1

1

1

1

Q2.

(a) element

(b) protons

allow electrons

neutrons

must be in this order

(c)  $\frac{12}{6.02 \times 10^{23}}$ 

(d) B

Property

Structural feature

Graphite has hexagonal rings of carbon atoms.

Graphite conducts electricity.

The bonds between carbon atoms in the layers are strong.

There are no covalent bonds between layers of atoms.

There are delocalised electrons in graphite.

do  ${\it not}$  accept more than  ${\it one}$  line from a box on the left

[7]

2

[8]

Q3.

(a) **C** 

(b) **D** 

(c) 4 / four

(d) very hard

 $\begin{array}{ccc} (e) & C_2H_6 \end{array} \hspace{2cm} 1$ 

(f)  $H^+$ 

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

= 62