

Gr, 10 Test 2 Febr/Mch '19 Memo

- 1.1 D
- 1.2 D
- 1.3 A
- 1.4 C
- 1.5 C
- 1.6 A
- 1.7 C
- 1.8 B
- 1.9 C
- 1.10 C

2.1.1. K ✓

2.1.2. 4s \uparrow

3p $\uparrow\downarrow \uparrow\downarrow \uparrow\downarrow$

3s $\uparrow\downarrow$

2p $\uparrow\downarrow \uparrow\downarrow \uparrow\downarrow$

2s $\uparrow\downarrow$

1s $\uparrow\downarrow$

structure ✓
opposite spin ✓
number of e ✓

2.1.3 1 (one) ✓

2.2.1 17 ✓

2.2.2. $1s^2 2s^2 2p^6 3s^2 3p^6$

format ✓ number of e ✓

2.2.3 argon (Ar) ✓

- 2.3.1 S (Ar) ✓
 2.3.2 Q (Li) ✓
 2.3.3 Q and U (Li + K) ✓
 2.3.4 Group 1 / Alkali metals ✓
 2.3.5 }
 Ar $\begin{matrix} 40 \\ 18 \end{matrix}$ ✓

2.4.1 Atoms of the same element having the same number of protons, but different number of neutrons. ✓

or
 Atoms with the same atomic number but different mass numbers.
 (Z or A)

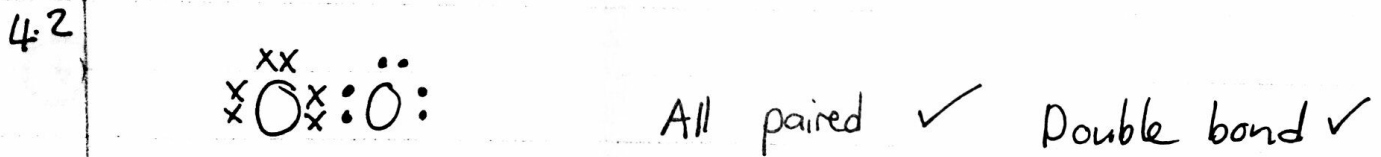
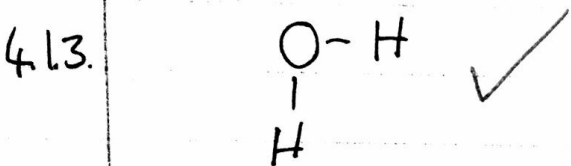
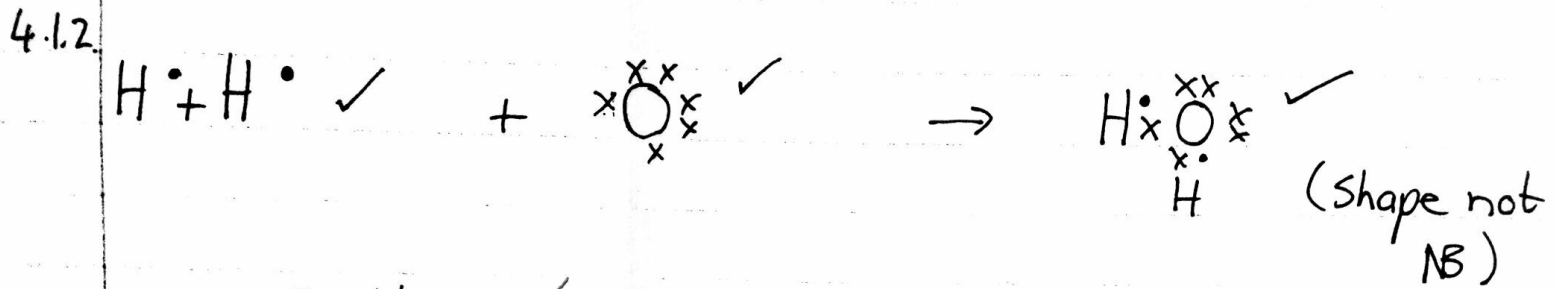
2.4.2 $\frac{5}{20} \times 23 + \frac{15}{20} \times 25$
 = 24,5 ✓

3.1 ionisation energy : energy required to remove e^-
 electron affinity : energy released to add e^-

3.2.1 atomic radius decrease ✓ therefore more energy required to remove e^- .

3.2.2 higher than ✓
 Na^+ full energy levels, large amount of energy needed to take
 Mg^+ will have full energy level (stable) if it loses one e^- ✓
 therefore little energy required to remove e^-

4.1.1 covalent bond (polar covalent bond) ✓



4.3.1 diamond ✓✓

4.3.2 graphite ✓✓

4.3.3 covalent (network) structure / giant molecular structure ✓