

Year 11 Chemistry
Test Answers: Elemental Chemistry

1.

- a) carbon (C)
- b) 7
- c) More colours are emitted by sodium than by lithium. This is because sodium has more energy levels/electrons.

2.

- a) Mg^{2+}
- b) Cl^-
- c) NH_4^+
- d) Co^{2+}
- e) Ag^+
- f) Fe^{3+}

3.

- a) K_2S
- b) CrPO_4
- c) SnO
- d) O_2
- e) CO_2
- f) H_2CO_3

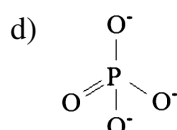
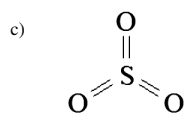
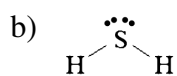
4.

- a) $2\text{K} + \text{Cu}(\text{NO}_3)_2 \rightarrow 2\text{KNO}_3 + \text{Cu}$
- b) $6\text{HCl} + 2\text{Al} \rightarrow 2\text{AlCl}_3 + 3\text{H}_2$

5.

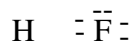
- a)
 - (i) ionic
 - (ii) only when melted or dissolved
- b)
 - (i) metallic
 - (ii) always
- c)
 - (i) covalent
 - (ii) never

6.

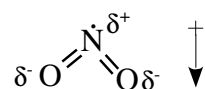


7. Describe, using a diagram for each, the following:

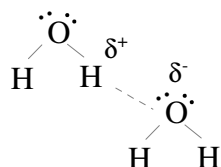
a) A covalent bond where the electrons are not shared equally.



b) A molecule with polar bonds that share a common dipole direction.

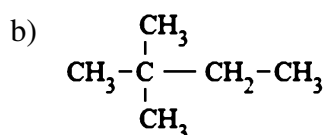
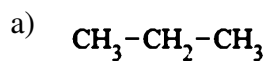


c) Dipole-dipole attraction where one dipole is N-H, O-H, or F-H



8. The ions are more highly charged.

9. Draw structural formula for the following

10. $\text{C}_x\text{H}_{2x+1}\text{O}$

11. (any use in nature or society; must be described, not just stated)