AQA, OCR, Edexcel

GCSE Science

GCSE Chemistry

Group 7 and Transition Metals Answers

Total Marks: /27

Q1: What name is given to the elements that are found within group 7 of the periodic table?

A=The halogens

(1 mark)

Q2: Discuss the properties of the group 7 metals.

A= Accept any 4 of the following:

- Toxic
- Low melting points
- Low boiling points
- Poor conductors – Heat/ electricity

(4 marks)

Q3: How do halogen molecules differ from other groups?

A= Accept 1 of the following:

- Diatonic molecules
- Exist in pairs

(1 mark)

Q4: Name the bond that joins halogen metals.

A= Covalent bond

(1 mark)

Q5: How many electrons do halogens need to gain to become stable?

A= 1

(1 mark)

Q6: Give 2 examples of a halogen.

A= Accept any 2 of the following:

- Fluorine
- Chlorine
- Bromine
- Iodine
- Astatine

(2 marks)

Q7: How does group 7 reactivity alter going down the group?

A= Decreases

(1 mark)

Q8: How does the melting and boiling point alter down the group?

A= Increases

(1 mark)

Q9: Explain why the reactivity of Group 7 alters as you go down the group?

- More lectron shells as you go down the group
- Outter sheel furthest away from the nucleus
- More difficult to gain an electron

(3 marks)

Q10: The halogens react with metals to form salts. Describe what occurs when different halogens are present in the reaction.

A= A more reactive halogen can displace a less reactive halogen from aqueous solution of its salt.

(2 mark)

Q11: Give an example of a transition metal.

A= Accept 1 of the following or another named transition metal:

- Iron
- Copper
- Nickel

(1 mark)

Q12: Which groups can the transition metals be found between?

A= Groups 2+3

(1 mark)

Q13:

i) Describe the physical properties of the transition metals.

A= Accept any 3 of the following:

- Good conductors – electrical and heat
- Hard/ strong
- High density
- High melting points

(3 marks)

ii) Considering the properties you discussed above. Name a transition metal that does not follow these properties.

A= Mercury

(1 mark)

Q14: How do the transition metals differ in reactivity to group 1 metals?

A= Less reactive

(1 mark)

Q15: Copper sulphate is a transition metal compound. What colour compound is produced from copper sulphate ions?
A= Blue

(1 mark)

Q16: What are transition metals often used for in industry?
A= Catalysts

(1 mark)

Q17: What is the Haber process used to make?
A= Ammonia

(1 mark)