

AQA, OCR, Edexcel

GCSE Science

GCSE Chemistry

Metals and non-metals
Questions

M M E

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Total Marks: /8

Q1: On the periodic table below, draw or shade the non-metals and metals.

The Periodic Table of Elements

| | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|------------------------------------|---|--|--------------------------------------|---|---------------------------------------|--------------------------------------|---|---|--|--|---------------------------------------|--|--|--|---|---------------------------------------|---|---|--|-------------------------------|
| 1 | | 2 | | | | | | | | | | | | 3 | 4 | 5 | 6 | 7 | 0 | | |
| | | Key relative atomic mass atomic symbol name atomic (proton) number | | | | | | | | | | 1 H hydrogen 1 | | | | | | | | | 4 He helium 2 |
| 7 Li lithium 3 | 9 Be beryllium 4 | | | | | | | | | | | 11 B boron 5 | 12 C carbon 6 | 14 N nitrogen 7 | 16 O oxygen 8 | 19 F fluorine 9 | 20 Ne neon 10 | | | | |
| 23 Na sodium 11 | 24 Mg magnesium 12 | | | | | | | | | | | 27 Al aluminium 13 | 28 Si silicon 14 | 31 P phosphorus 15 | 32 S sulfur 16 | 35.5 Cl chlorine 17 | 40 Ar argon 18 | | | | |
| 39 K potassium 19 | 40 Ca calcium 20 | 45 Sc scandium 21 | 48 Ti titanium 22 | 51 V vanadium 23 | 52 Cr chromium 24 | 55 Mn manganese 25 | 56 Fe iron 26 | 59 Co cobalt 27 | 59 Ni nickel 28 | 63.5 Cu copper 29 | 65 Zn zinc 30 | 70 Ga gallium 31 | 73 Ge germanium 32 | 75 As arsenic 33 | 79 Se selenium 34 | 80 Br bromine 35 | 84 Kr krypton 36 | | | | |
| 85 Rb rubidium 37 | 88 Sr strontium 38 | 89 Y yttrium 39 | 91 Zr zirconium 40 | 93 Nb niobium 41 | 96 Mo molybdenum 42 | [98] Tc technetium 43 | 101 Ru ruthenium 44 | 103 Rh rhodium 45 | 106 Pd palladium 46 | 108 Ag silver 47 | 112 Cd cadmium 48 | 115 In indium 49 | 119 Sn tin 50 | 122 Sb antimony 51 | 128 Te tellurium 52 | 127 I iodine 53 | 131 Xe xenon 54 | | | | |
| 133 Cs caesium 55 | 137 Ba barium 56 | 139 La* lanthanum 57 | 178 Hf hafnium 72 | 181 Ta tantalum 73 | 184 W tungsten 74 | 186 Re rhenium 75 | 190 Os osmium 76 | 192 Ir iridium 77 | 195 Pt platinum 78 | 197 Au gold 79 | 201 Hg mercury 80 | 204 Tl thallium 81 | 207 Pb lead 82 | 209 Bi bismuth 83 | [209] Po polonium 84 | [210] At astatine 85 | [222] Rn radon 86 | | | | |
| [223] Fr francium 87 | [226] Ra radium 88 | [227] Ac* actinium 89 | [261] Rf rutherfordium 104 | [262] Db dubnium 105 | [266] Sg seaborgium 106 | [264] Bh bohrium 107 | [277] Hs hassium 108 | [268] Mt meitnerium 109 | [271] Ds darmstadtium 110 | [272] Rg roentgenium 111 | [285] Cn copernicium 112 | [286] Nh nihonium 113 | [289] Fl flerovium 114 | [289] Mc moscovium 115 | [293] Lv livermorium 116 | [294] Ts tennessine 117 | [294] Og oganeson 118 | | | | |

(2 marks)

Q2: How many electrons do group 1, group 2 and group 7 have in their outer shell?

Group 1: _____

Group 2: _____

Group 7: _____

(3 marks)

Q3: Atoms are most stable when they have a full outer shell. Therefore, are metals (groups 1 and 2) likely to lose or gain electrons? Explain.

(2 marks)

Q4: Following this, are metal ions positive or negative?

(1 mark)