

GCSE Chemistry B (Twenty First Century Science)
J258/01 Breadth in Chemistry (Foundation Tier)

Question Set 5

Multiple Choice Questions

1

Table 1.1 shows some data for four elements Q, R, T and X.

Element	Melting point (°C)	Boiling point (°C)	Electrical conductivity when solid	Reactivity
Q	-189	-186	none	unreactive
R	98	883	good	very reactive
T	-101	-35	none	very reactive
X	119	445	none	fairly reactive

Table 1.1

(a) Which element in Table 1.1 is a metal?

Explain your answer.

[1]

(b)

Which element in Table 1.1 is a liquid at 500 °C?

[1]

(c) Which element in Table 1.1 has an atom with eight electrons in its outer shell?

Explain your answer.

[2]

(d) Element T in Table 1.1 reacts with a metal to make a compound.

What type of structure does this compound have?

Tick (✓) **one** box.

Giant covalent

Giant ionic

Simple covalent

[1]

(e) An element has an atomic number of 16.

How many electrons are there in an atom of this element?

[1]

Total Marks for Question Set 5: 6

Resource Materials

Question Set No: 5

The Periodic Table of the Elements

(1)	(2)												(3)	(4)	(5)	(6)	(7)	(0)
1 H hydrogen 1.0	2	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>Key atomic number Symbol name relative atomic mass</p> </div>										13	14	15	16	17	18 He helium 4.0	
3 Li lithium 6.9	4 Be beryllium 9.0												5 B boron 10.8	6 C carbon 12.0	7 N nitrogen 14.0	8 O oxygen 16.0	9 F fluorine 19.0	10 Ne neon 20.2
11 Na sodium 23.0	12 Mg magnesium 24.3												13 Al aluminium 27.0	14 Si silicon 28.1	15 P phosphorus 31.0	16 S sulfur 32.1	17 Cl chlorine 35.5	18 Ar argon 39.9
19 K potassium 39.1	20 Ca calcium 40.1	21 Sc scandium 45.0	22 Ti titanium 47.9	23 V vanadium 50.9	24 Cr chromium 52.0	25 Mn manganese 54.9	26 Fe iron 55.8	27 Co cobalt 58.9	28 Ni nickel 58.7	29 Cu copper 63.5	30 Zn zinc 65.4	31 Ga gallium 69.7	32 Ge germanium 72.6	33 As arsenic 74.9	34 Se selenium 79.0	35 Br bromine 79.9	36 Kr krypton 83.8	
37 Rb rubidium 85.5	38 Sr strontium 87.6	39 Y yttrium 88.9	40 Zr zirconium 91.2	41 Nb niobium 92.9	42 Mo molybdenum 95.9	43 Tc technetium	44 Ru ruthenium 101.1	45 Rh rhodium 102.9	46 Pd palladium 106.4	47 Ag silver 107.9	48 Cd cadmium 112.4	49 In indium 114.8	50 Sn tin 118.7	51 Sb antimony 121.8	52 Te tellurium 127.6	53 I iodine 126.9	54 Xe xenon 131.3	
55 Cs caesium 132.9	56 Ba barium 137.3	57-71 lanthanoids	72 Hf hafnium 178.5	73 Ta tantalum 180.9	74 W tungsten 183.8	75 Re rhenium 186.2	76 Os osmium 190.2	77 Ir iridium 192.2	78 Pt platinum 195.1	79 Au gold 197.0	80 Hg mercury 200.6	81 Tl thallium 204.4	82 Pb lead 207.2	83 Bi bismuth 209.0	84 Po polonium	85 At astatine	86 Rn radon	
87 Fr francium	88 Ra radium	89-103 actinoids	104 Rf rutherfordium	105 Db dubnium	106 Sg seaborgium	107 Bh bohrium	108 Hs hassium	109 Mt meitnerium	110 Ds darmstadtium	111 Rg roentgenium	112 Cn copernicium		114 Fl flerovium		116 Lv livermorium			

OCR

Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge