

O Level Combined Chemistry MCQs

Chemical Bonding Test 2.0

Q1

Two elements **P** and **Q** react together to form an ionic compound with the formula P_3Q_2 . Which row describes the bonding between **P** and **Q** correct?

	electrons given away by each atom of P	electrons received by each atom of Q
A	2	3
B	3	3
C	3	1
D	3	2

Q2

Which of the following statements is **not** true?

- A** A single covalent bond is formed by the sharing of two electrons.
- B** Carbon dioxide molecule has two double bonds.
- C** Covalent compounds are usually solids at room conditions.
- D** In the formation of ammonia, each nitrogen atom will share three pairs of electrons with three hydrogen atoms.

Q3

Element **P** has n protons and forms an ion with a charge of $2-$.

Element **Q** has $(n+1)$ protons.

What is the type and formula of the compound formed between elements **P** and **Q**?

- A** a covalent compound, P_2Q
- B** a covalent compound, PQ_2
- C** an ionic compound, PQ_2
- D** an ionic compound, P_2Q

Q4

The table shows four elements W, X, Y and Z with their proton numbers.

element	W	X	Y	Z
proton number	6	8	11	17

Which of the following shows the correct formula of likely ionic and covalent compounds formed from the four elements shown above?

	formula of ionic compound	formula of covalent compound
A	WX	YZ
B	YW	WZ ₄
C	YZ	ZX
D	Y ₂ X	WX ₂

Q5

Which of the following could be an ionic compound?

	melting point / °C	boiling point / °C	electrical conductivity of		
			solid	liquid	solution in water
A	1610	2230	poor	poor	insoluble
B	660	2470	good	good	insoluble
C	-112	-83.7	poor	poor	good
D	801	1413	poor	good	good

Q6

Which of the following is likely to have an ionic lattice structure?

substance	melting point /°C	electrical conductivity	
		in solid state	in molten state
A	-78	poor	good
B	651	poor	good
C	900	good	good
D	1710	poor	poor

Q7

Elements X and Y form the compound X_3Y . Which of the following is the correct electronic configuration of atoms X and Y?

	electronic configuration of atom X	electronic configuration of atom Y
A	2,1	2,3
B	2,5	2,1
C	2,8,1	2,8,5
D	2,8,5	2,8,3

Q8

The table shows four elements W, X, Y and Z with their proton numbers

element	W	X	Y	Z
proton number	6	8	11	17

Which of the following shows the correct formula of likely ionic and covalent compounds formed from the four elements shown above?

	formula of ionic compound	formula of covalent compound
A	WX	YZ
B	YW	WZ ₄
C	YZ	ZX
D	Y ₂ X	WX ₂

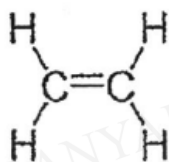
Q9

Which of the following could be an ionic compound?

	melting point / °C	boiling point / °C	electrical conductivity of		
			solid	liquid	solution in water
A	1610	2230	poor	poor	insoluble
B	660	2470	good	good	insoluble
C	-112	-83.7	poor	poor	good
D	801	1413	poor	good	good

Q10

How many electrons are shared in the covalent bonds in an ethene molecule?



- A 5
- B 6
- C 10
- D 12

Answers

Chemical Bonding Test 2.0

Q1 A

Q2 C

Q3 B

Q4 D

Q5 D

Q6 B

Q7 C

Q8 D

Q9 D

Q10 D

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