

Suggested Answers on Note (Chapter 2) P.2

Common elements and their Symbol

A. Metal

Element	Symbol	State	Element	Symbol	State
Aluminium 鋁	Al	s	Magnesium 鎂	Mg	s
Barium 鋇	Ba	s	Manganese 錳	Mn	s
Beryllium 鈹	Be	s	Mercury 汞	Hg	l
Calcium 鈣	Ca	s	Nickel 鎳	Ni	s
Chromium 鉻	Cr	s	Platinum 鉑	Pt	s
Cobalt 鈷	Co	s	Potassium 鉀	K	s
Copper 銅	Cu	s	Silver 銀	Ag	s
Gold 金	Au	s	Sodium 鈉	Na	s
Iron 鐵	Fe	s	Tin 錫	Sn	s
Lead 鉛	Pb	s	Zinc 鋅	Zn	s
Lithium 鋰	Li	s			

Remark: All metals except mercury are solids in room condition.

B. Non-metal

Element	Symbol	State	Element	Symbol	State
Bromine 溴	Br	l	Iodine 碘	I	s
Carbon 碳	C	s	Nitrogen 氮	N	g
Chlorine 氯	Cl	g	Oxygen 氧	O	g
Fluorine 氟	F	g	Phosphorus 磷	P	s
Hydrogen 氫	H	g	Sulphur 硫	S	s

Remark: Non-metals can exist as solid, liquid and gas. However, bromine is the only liquid element in room condition.

C. Semi-metal

Element	Symbol	State
Boron 硼	B	s
Silicon 矽	Si	s

Remark: They have properties between those of metals and non-metals.

D. Noble Gas

Element	Symbol	State
Argon 氬	Ar	g
Helium 氦	He	g
Neon 氖	Ne	g

Remark: Noble Gases are non-metal.

P.S. There are two liquid elements: mercury (metal) and bromine (non-metal)

Suggested Answers on Note (Chapter 2) P.8

Element	Symbol	State at room temperature and pressure
Aluminium	Al	Solid
Calcium	Ca	Solid
Hydrogen	H	Gas
Sodium	Na	Solid
Chlorine	Cl	Gas
Potassium	K	Solid
Oxygen	O	Gas
Sulphur	S	Solid
Mercury	Hg	Liquid
Bromine	Br	Liquid
Silicon	Si	Solid
Phosphorus	P	Solid

Suggested Answers on Note (Chapter 2) P.12

Compound	Elements
Water	Hydrogen, oxygen
Carbon dioxide	Carbon, oxygen
Sodium chloride	Sodium, chlorine
Iron(II) sulphide	Iron, sulphur

Suggested Answers on Note (Chapter 2) P.15 – 17

1. Y. Solid Y melts to give a liquid at $-110\text{ }^{\circ}\text{C}$. Liquid Y boils at $-40\text{ }^{\circ}\text{C}$. Therefore Y is a liquid at $-70\text{ }^{\circ}\text{C}$.

2.

Physical property	Difference
Melting and boiling points	The melting and boiling points of metals are high while those of non-metals are low.
Electrical conductivity	Metals are good conductors while non-metals are poor conductors.
Heat conductivity	Metals are good conductors while non-metals are poor conductors.

3. X is a non-metal.
It has a low melting point and does not conduct electricity.
Y is a metal.
It is shiny and can be bent or hammered into shape.
Z is a metalloid.
It has the property of a non-metal (a brittle solid) and the property of a metal (can conduct electricity).
4. (a) A is a non-metal.
It is a gas and does not conduct electricity.
B is a metal.
It is a shiny solid and a good conductor of electricity.
- (b) C is mercury.
C is a liquid at room temperature and pressure.
5. • It is a good conductor of electricity.
• It is ductile.
• It is a good conductor of heat.
• It can react with water to form hydrogen.
• It is malleable.

ANY TWO