IGCSE Cambridge Topical Past Papers

CHEMISTRY

0620 Paper 1

2017 — 2023

CHEMISTRY 0620

TOPICAL PAST PAPER WORKSHEETS

2017 - 2023 | Questions + Mark scheme

AVAILABLE PAPERS

P1	P2	P3	P4	P6
1362 Questions	1385 Questions	715 Questions	550 Questions	186 Questions

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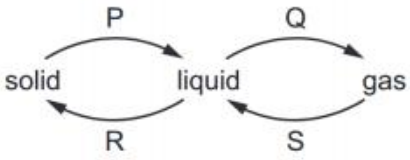
TOPICS	P1	P2	P3	P4	P6
STATES OF MATTER	57	38	31	9	1
SEPARATING SUBSTANCES	71	66	24	12	33
ATOMS & ELEMENTS	82	67	65	50	1
ATOMS COMBINING	87	99	64	46	0
REACTING MASSES & CHEMICAL EQUATIONS	39	57	32	38	4
USING MOLES	5	13	2	28	3
REDOX REACTIONS	31	44	20	6	0
ELECTRICITY & CHEMICAL CHANGES	48	54	37	33	3
ENERGY CHANGES & REVERSIBLE REACTIONS	88	103	26	34	18
THE SPEED OF A REACTION	57	64	38	27	31
ACIDS & BASES	108	113	54	47	32
THE PERIODIC TABLE	133	114	57	28	0
THE BEHAVIOR OF METALS	74	76	44	19	3
MAKING USE OF METALS	73	71	30	30	1
AIR & WATER	69	67	41	16	2
SOME NON-METALS & THEIR COMPOUNDS	80	97	37	27	2
ORGANIC CHEMISTRY	172	151	62	50	1
POLYMERS	47	71	17	28	1
IN THE LAB (CHEMICAL TEST & SALT ANALYSIS)	41	20	34	22	50

1 - (0620/11_Summer_2017_Q1) - *States Of Matter*

The diagram shows some changes of state.



Which words describe the changes of state, P, Q, R and S?

	P	Q	R	S
A	freezing	boiling	melting	evaporation
B	melting	evaporation	freezing	condensation
C	melting	sublimation	freezing	evaporation
D	sublimation	evaporation	melting	condensation

2 - (0620/12_Summer_2017_Q1) - *States Of Matter*

Four statements about the arrangement of particles are given.

1 Particles are packed in a regular arrangement.

2 Particles are randomly arranged.

3 Particles move over each other.

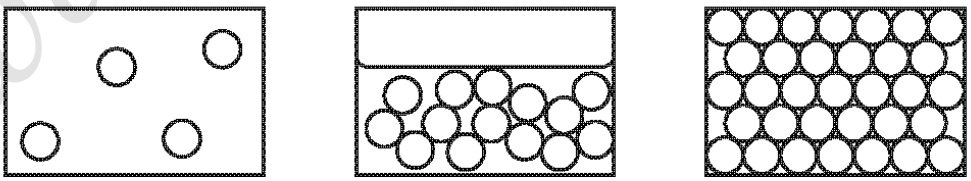
4 Particles vibrate about fixed points.

Which statements describe the particles in a solid?

A 1 and 3 **B** 1 and 4 **C** 2 and 3 **D** 2 and 4

3 - (0620/13_Summer_2017_Q1) - *States Of Matter*

Diagrams R, S and T represent the three states of matter.



Which change occurs during freezing?

A R → S **B** S → T **C** T → R **D** T → S

4 – (0620/13_Summer_2017_Q3) – *States Of Matter*

A compound, X, has a melting point of 71 °C and a boiling point of 375 °C.

Which statement about X is correct?

A It is a liquid at 52 °C and a gas at 175 °C.

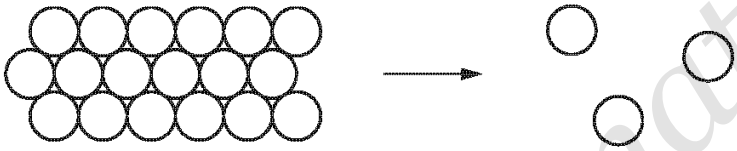
B It is a liquid at 69 °C and a gas at 380 °C.

C It is a liquid at 75 °C and a gas at 350 °C.

D It is a liquid at 80 °C and a gas at 400 °C.

5 – (0620/11_Winter_2017_Q1) – *States Of Matter*

The diagram shows how the arrangement of particles changes when a substance changes state.



Which change of state is shown?

A boiling

B condensation

C evaporation

D sublimation

6 – (0620/12_Winter_2017_Q1) – *States Of Matter*

The melting points and boiling points of four elements are shown.

element	melting point / °C	boiling point / °C
W	–7	60
X	–101	–34
Y	114	184
Z	39	688

In which elements do the particles vibrate about fixed positions at 0 °C?

A W and X **B** W and Z **C** X and Y **D** Y and Z

7 - (0620/13_Winter_2017_Q1) - *States Of Matter*

Which statement about liquids and gases is correct?

A 1 cm^3 of gas contains more particles than 1 cm^3 of liquid.

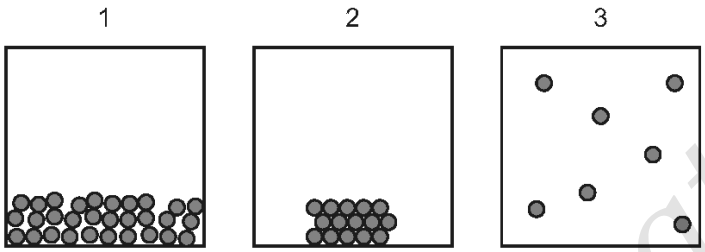
B A given mass of liquid has a fixed volume at room temperature.

C Particles in a liquid can easily be forced closer together.

D Particles in a liquid have fixed positions.

8 - (0620/11_Summer_2018_Q1) - *States Of Matter*

The diagrams show particles in a container.



Which two diagrams show the process of evaporation?

A $1 \rightarrow 2$ **B** $1 \rightarrow 3$ **C** $2 \rightarrow 3$ **D** $3 \rightarrow 1$

9 - (0620/12_Summer_2018_Q1) - *States Of Matter*

When iodine is heated it turns from a solid to a gas.

When liquid ammonia is cooled it turns into a solid.

When ice is heated it turns into water.

Which terms describe these changes of state?

	when iodine is heated	when liquid ammonia is cooled	when ice is heated
A	boiling	freezing	melting
B	freezing	sublimation	boiling
C	sublimation	condensation	freezing
D	sublimation	freezing	melting

10 - (0620/11_Winter_2018_Q1) - *States Of Matter*

A beaker containing solid carbon dioxide is placed in a fume cupboard at room temperature. The carbon dioxide becomes gaseous.

Which process describes this change of state?

A boiling

B condensation

C evaporation

D sublimation

11 - (0620/12_Winter_2018_Q1) - *States Of Matter*

A gas is heated. The pressure is kept constant.

Which statement describes the behaviour of the particles in the gas?

A The particles move faster and become closer together.

B The particles move faster and become further apart.

C The particles move slower and become closer together.

D The particles move slower and become further apart.

12 - (0620/13_Winter_2018_Q1) - *States Of Matter*

The statements describe two changes of state.

1 The molecules of substance X are arranged randomly.
During the change of state, they lose energy and become more ordered. The molecules can still move freely.

2 The molecules of substance Y are arranged in a regular lattice.
During the change of state, they gain energy and become less ordered. The molecules are still close together.

Which changes of state are described by the statements?

	1	2
A	condensation	evaporation
B	condensation	melting
C	freezing	evaporation
D	freezing	melting

13 - (0620/11_Winter_2018_Q2) - *States Of Matter*

The pressure of a sample of gas is decreased. The temperature is kept constant.

Which row describes the effects on the particles?

	movement of particles	collisions between particles
A	slower	occur less often
B	slower	occur with more force
C	no change in speed	occur less often
D	no change in speed	occur with more force

14 - (0620/12_Winter_2018_Q2) - *States Of Matter*

In which state does 1 dm^3 of methane contain the most particles?

A gas at 100 °C

B gas at room temperature

C liquid

D solid

15 - (0620/13_Winter_2018_Q2) - *States Of Matter*

Which statement about gases is correct?

A Gases are difficult to compress when pressure is applied.

B The particles in gases are close together.

C The particles in gases have a random arrangement.

D The particles in gases move slowly past each other.

16 - (0620/11_Summer_2019_Q1) - *States Of Matter*

Sodium chloride is a liquid at 900 °C.

How are the particles arranged and how do the particles move in sodium chloride at 900 °C?

	arrangement of particles	motion of particles
A	regular	vibrate about a fixed point
B	regular	move randomly
C	random	vibrate about a fixed point
D	random	move randomly

ANSWERS

1 – (0620/11_Summer_2017_Q1) – *States Of Matter*

B

2 – (0620/12_Summer_2017_Q1) – *States Of Matter*

B

3 – (0620/13_Summer_2017_Q1) – *States Of Matter*

B

4 – (0620/13_Summer_2017_Q3) – *States Of Matter*

D

5 – (0620/11_Winter_2017_Q1) – *States Of Matter*

D

6 – (0620/12_Winter_2017_Q1) – *States Of Matter*

D

7 – (0620/13_Winter_2017_Q1) – *States Of Matter*

B

8 – (0620/11_Summer_2018_Q1) – *States Of Matter*

B

9 – (0620/12_Summer_2018_Q1) – *States Of Matter*

D

10 – (0620/11_Winter_2018_Q1) – *States Of Matter*

D

11 – (0620/12_Winter_2018_Q1) – *States Of Matter*

B

12 – (0620/13_Winter_2018_Q1) – *States Of Matter*

B

13 – (0620/11_Winter_2018_Q2) – *States Of Matter*

C

14 – (0620/12_Winter_2018_Q2) – *States Of Matter*

D

15 – (0620/13_Winter_2018_Q2) – *States Of Matter*

C

16 – (0620/11_Summer_2019_Q1) – *States Of Matter*

D

17 – (0620/12_Summer_2019_Q1) – *States Of Matter*

D

18 – (0620/13_Summer_2019_Q1) – *States Of Matter*

A

19 – (0620/11_Winter_2019_Q1) – *States Of Matter*

A