

# CHEMISTRY

0620 Paper 1

2020 — 2024

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1 - (0620/11\_Summer\_2020\_Q1) - States Of Matter

Nitrogen is heated in a balloon, which expands slightly.

Which statements about the molecules of nitrogen are correct?

- 1 They move further apart.
- 2 They move more quickly.
- 3 They remain the same distance apart.
- 4 Their speed remains unchanged.

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

2 - (0620/11\_Summer\_2020\_Q2) - States Of Matter

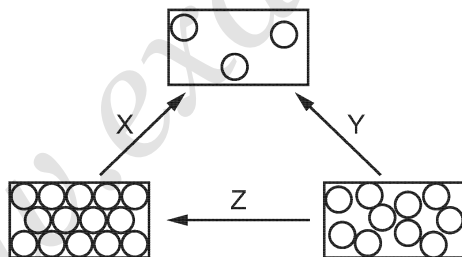
Which piece of apparatus should be used to measure exactly  $21.4 \text{ cm}^3$  of water?

- A  $25 \text{ cm}^3$  beaker
- B  $25 \text{ cm}^3$  pipette
- C  $50 \text{ cm}^3$  burette
- D  $50 \text{ cm}^3$  measuring cylinder

3 - (0620/12\_Summer\_2020\_Q1) - States Of Matter

Each rectangle shows the arrangement of particles in each of the three states of matter.

X, Y and Z represent the processes needed to change from one state to another.

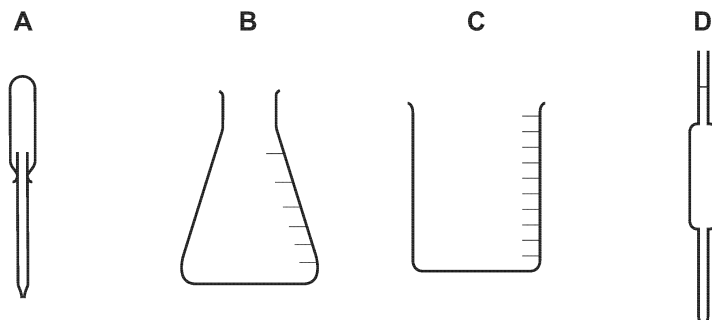


What are the processes X, Y and Z?

	X	Y	Z
A	evaporating	subliming	condensing
B	evaporating	subliming	freezing
C	subliming	evaporating	condensing
D	subliming	evaporating	freezing

4 - (0620/12\_Summer\_2020\_Q2) - States Of Matter

Which piece of apparatus is used to measure  $25.0\text{ cm}^3$  of aqueous sodium hydroxide?



5 - (0620/13\_Summer\_2020\_Q1) - States Of Matter

Descriptions of the three states of matter are shown.

	particle separation	particle arrangement	type of motion
1	small	random	move past each other at low speed
2	large	random	rapid motion in straight lines
3	small	regular	vibration

Which row is correct?

	1	2	3
A	gas	liquid	solid
B	liquid	solid	gas
C	liquid	gas	solid
D	solid	gas	liquid

6 - (0620/13\_Summer\_2020\_Q2) - States Of Matter

Which piece of apparatus is used to measure  $13.7\text{ cm}^3$  of dilute hydrochloric acid?

- A balance
- B burette
- C conical flask
- D pipette

7 - (0620/11\_Winter\_2020\_Q1) - States Of Matter

'The movement of a substance **very slowly** from an area of high concentration to an area of low concentration.'

Which process is being described?

- A a liquid being frozen
- B a solid melting
- C a substance diffusing through a liquid
- D a substance diffusing through the air

8 - (0620/11\_Winter\_2020\_Q2) - States Of Matter

What happens to the average speed of gas particles when pressure and temperature are increased?

	average speed of particles	
	pressure increases	temperature increases
A	faster	faster
B	unchanged	slower
C	slower	faster
D	unchanged	faster

9 - (0620/11\_Winter\_2020\_Q3) - States Of Matter

Which piece of apparatus can only measure a single fixed volume?

- A 250 cm<sup>3</sup> beaker
- B 50 cm<sup>3</sup> burette
- C 100 cm<sup>3</sup> measuring cylinder
- D 25 cm<sup>3</sup> pipette

10 - (0620/12\_Winter\_2020\_Q2) - States Of Matter

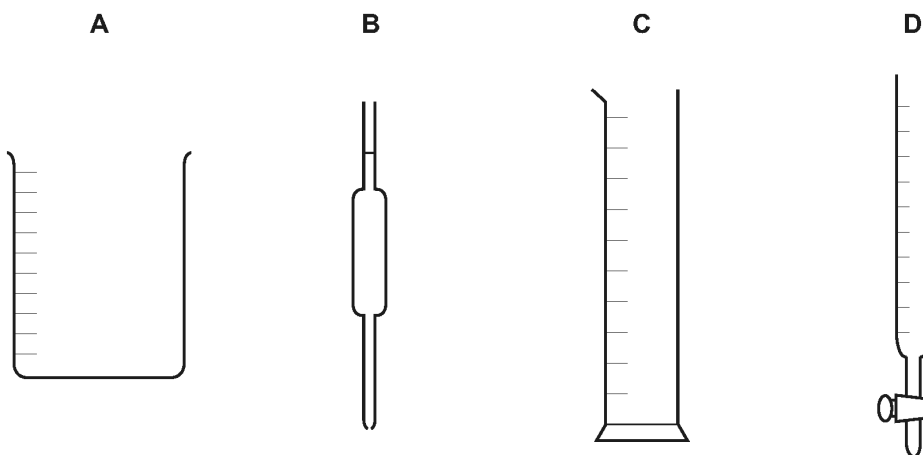
Oxygen melts at  $-219^{\circ}\text{C}$  and boils at  $-183^{\circ}\text{C}$ .

At which temperature is oxygen a liquid?

- A  $-225^{\circ}\text{C}$
- B  $-189^{\circ}\text{C}$
- C  $-175^{\circ}\text{C}$
- D  $25^{\circ}\text{C}$

11 - (0620/12\_Winter\_2020\_Q3) - States Of Matter

Which diagram shows a burette?



12 - (0620/13\_Winter\_2020\_Q2) - States Of Matter

When a dark grey solid element is heated, it changes directly into a purple gas.

Which word describes this change?

- A boiling
- B evaporation
- C melting
- D sublimation

13 - (0620/11\_Summer\_2021\_Q1) - States Of Matter

Which row describes the arrangement and movement of particles in a liquid?

	arrangement of particles	movement of particles
A	touching and regular	vibrating
B	touching and random	moving around each other
C	touching and regular	moving around each other
D	touching and random	moving very fast

# ANSWERS

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1 - (0620/11\_Summer\_2020\_Q1) - *States Of Matter*

A

2 - (0620/11\_Summer\_2020\_Q2) - *States Of Matter*

C

3 - (0620/12\_Summer\_2020\_Q1) - *States Of Matter*

D

4 - (0620/12\_Summer\_2020\_Q2) - *States Of Matter*

D

5 - (0620/13\_Summer\_2020\_Q1) - *States Of Matter*

C

6 - (0620/13\_Summer\_2020\_Q2) - *States Of Matter*

B

7 - (0620/11\_Winter\_2020\_Q1) - *States Of Matter*

C

8 - (0620/11\_Winter\_2020\_Q2) - *States Of Matter*

D

9 - (0620/11\_Winter\_2020\_Q3) - *States Of Matter*

D

10 - (0620/12\_Winter\_2020\_Q2) - *States Of Matter*

B