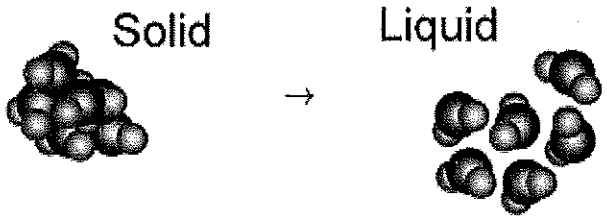
Year 7 Science 2024 modified goconnor

Chemistry 1 Test

SECTION 1: MULTIPLE CHOICE (1 mark each)
Circle your answer on the multiple choice answer sheet.

1. Which **change in state** is illustrated?



   a) Melting
   b) Freezing
   c) Evaporation
   d) Condensation

2. Which best describes a **solid**?
   a) Its particles vibrate in place
   b) Its particles do not move at all
   c) Its particles can flow past each other
   d) Its particles are very far apart

3. Which states of matter have **no fixed shape** and **no fixed volume**?
   a) Gas and liquid
   b) Liquid and solid
   c) Plasma and gas
   d) Solid and plasma

4. Which statement best describes why gases are **easily compressed**.
   a) The particles can diffuse
   b) There is a pressure between particles squashing them together
   c) There is great energy between the particles allowing them to change
   d) There is a lot of a space between the particles.

5. The definition of **melting point** is:
   a) the temperature at which a liquid changes to a gas
   b) the temperature at which a solid changes to a gas
   c) the temperature at which a liquid changes to a solid
   d) the temperature at which a solid changes to a liquid.

6. A **physical change** is
   a) When a substance is formed
   b) One that can easily be reversed.
   c) When bubbles, smell or a colour change can be released.
   d) Also called a chemical reaction

7. The separation techniques that relies on one substance being **more soluble** than another is
   a) combustion.
   b) magnetic separation.
   c) filtration.
   d) evaporation and crystallisation.

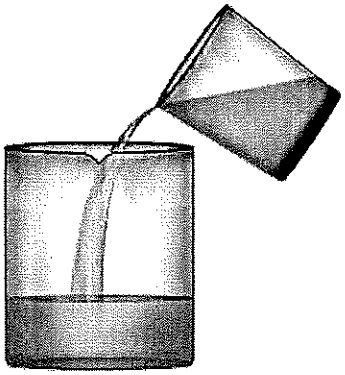
8. Which of the following would **not** be a physical change?
   a) Freezing water to make ice cubes
   b) Melting gold to make jewellery
   c) Burning gasoline in a lawn mower
   d) Boiling water for soup

9. To separate a mixture of **paper clips and sand**, Joe should use
   a) Wind separation
   b) Distillation
   c) Magnetic separation
   d) Decanting

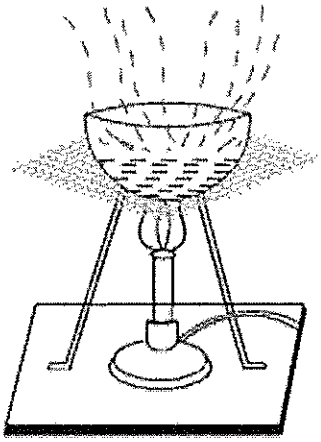
10. To separate **two or more liquids**, you would use
   a) Distillation
   b) Chromatography
   c) Centrifugation
   d) Filtration

11. Which of the following pictures shows **decantation**?

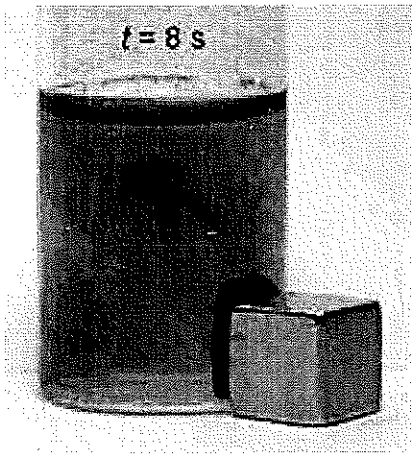
a)



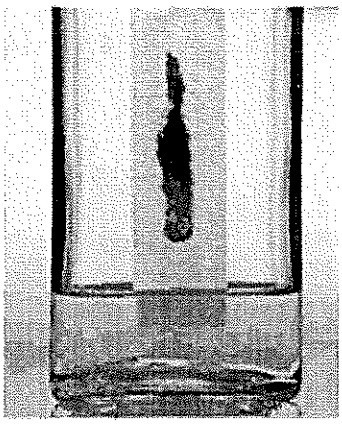
b)



c)



d)



12. **Distillation** is not useful for
    a) Purifying water
    b) Making distilled water
    c) Making essential oils or alcoholic liquors
    d) Extracting pure salt from sea water

13. A student wishes to obtain **fresh water from salt water**. The best way to do this is by:
    a) Filtration
    b) Evaporation
    c) Distillation
    d) Decanting

14. If you were planning to collect salt from sea water, which of the following pieces of apparatus would be of **least use**?
    a) Filter funnel
    b) Evaporating basin
    c) Bunsen burner
    d) Tripod

15. **Paper chromatography** is good for separating
    a) mixtures of food colours.
    b) mixtures of perfumes or flavourings.
    c) sugar from sand.
    d) gases.

Chemistry I Test

NAME: _____

FORM: _____ **DATE:** _____

Multiple Choice	Short Answer	Total
/15	/30	/45

SECTION ONE: Multiple choice answers
Cross (X) through the correct answer.

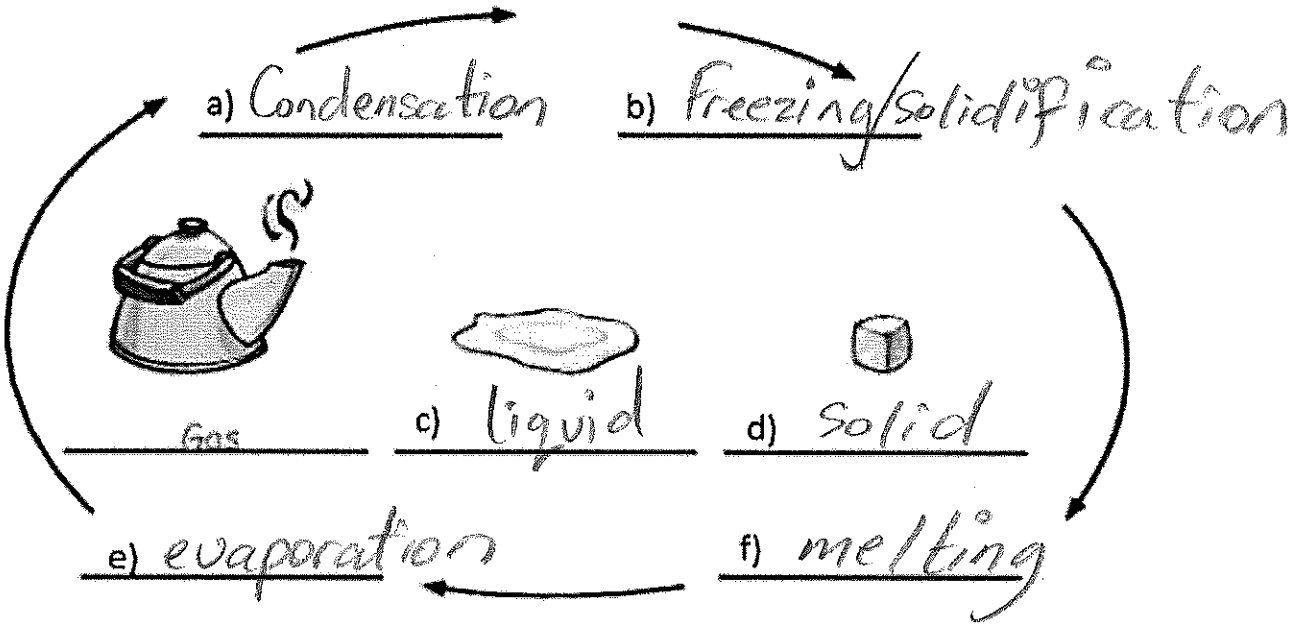
1	a	b	c	d
2	a	b	c	d
3	a	b	c	d
4	a	b	c	d
5	a	b	c	d
6	a	b	c	d
7	a	b	c	d
8	a	b	c	d
9	a	b	c	d
10	a	b	c	d
11	a	b	c	d
12	a	b	c	d
13	a	b	c	d
14	a	b	c	d
15	a	b	c	d

SECTION 2: WRITTEN

Write your answers in the spaces on the answer sheet provided.

1. Label the states of matter and phase changes in the following diagram.

(6 marks)



2 Classify the following as solids, liquids or gases.

Air, milk, Ice, Wood, Rain, Rice, Steam, Steel, Snow, Cloud, Rock, Lava (6 marks)

Gas	Solid	Liquid
AIR	rock	milk
Cloud	ice	lava
Steam	wood	rain
	snow	
	rice	

steel

3. Explain **step by step** how you would separate a mixture of sand, sugar and iron filings, so that you could recover each part of the mixture in a relatively pure form. (4 marks)

remove iron filings using magnet
add water to sand + sugar
filter through filter paper to remove sand
water + sugar heated in evaporation basin
iron filings → sand → sugar

4. Filtration is used widely around the home and all around us. Give **two** examples of filters used in every-day life. answers will vary (2 marks) washing machine

FILTER A tea bag air conditioner

FILTER B pasta/rice sieve/colander

5. When cooking rice it is important to wash the rice in water to remove the starch on the rice grains. After washing the rice, the water is removed by pouring off the water.

What **type of separation** is this? (1 mark)

Deantation or gravity seperation

6. Starting with muddy sea water, name the **separation techniques** you would use to end up with

(3 marks)

a) clean sea water. filtration

b) dry salt. evaporation

c) pure water. distillation

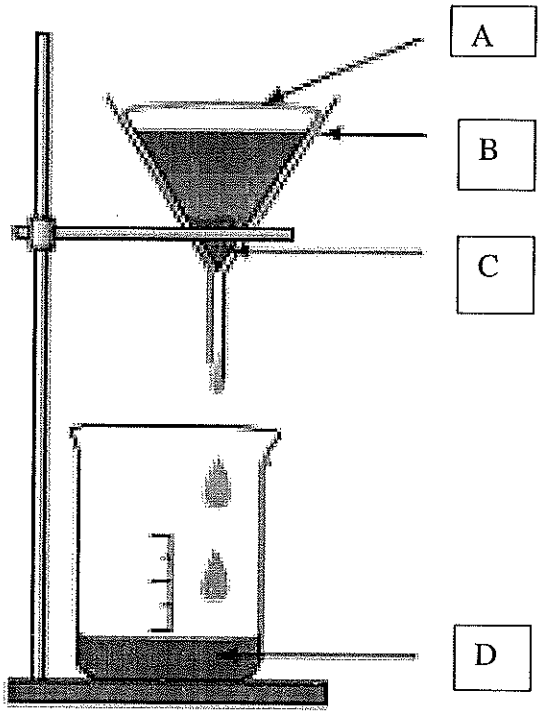
7. Match the following words to their correct definition. (6 marks)

Letter	Word	Number	Definitions	Match the letter corresponding to the word with the number for the correct definition. Eg. G 7
A	matter	1	A substance that will dissolve in a liquid	A 6
B	Solution	2	A material made up of two or more different substances which are physically combined.	B 5
C	Mixture	3	A substance that is able to dissolve other substances	C 2
D	Solute	4	A solution that has dissolved a large amount of solute and is not able to dissolve any more.	D 1
E	Saturated	5	A mixture of a solvent and a solute	E 4
F	Solvent	6	Anything that takes up space.	F 3

8. Label the following diagram (2 marks)

Word bank:

retort stand, filtrate, bosshead, funnel, residue, filter paper, beaker, clamp, funnel stand



Letter	Name
A	filter paper
B	funnel
C	residue
D	filtrate