

Name:	Target Grade:	Actual Grade:
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ELEMENTS MIXTURE COMPOUNDS MCQ and STRUCTURED QUESTIONS

READ THESE INSTRUCTIONS FIRST

INSTRUCTIONS TO CANDIDATES

1. Find a quiet, comfortable spot free place from distractions.
2. Spend one minute on each mark.
3. Time yourself for every single question.
4. Every chapter has their own question types. Ensure that you know the different question type for each chapter.
5. Make a conscientious effort to remember your mistakes, especially in terms of answering techniques. E.g Take a picture for the mistakes that you made, keep it in a photo album, and revise it over and over again.
6. Highlight question types that you tend to keep making mistakes and review them nearing exams.
7. Always review the common questions and question type that you tend to make mistakes nearing exams.
8. During exams, classify the question type and recall what you have learnt, how you need to analyse the questions for the different question type, what you need to take note of and answer with the correct answering techniques!

✦ Wishing you all the best for this test!

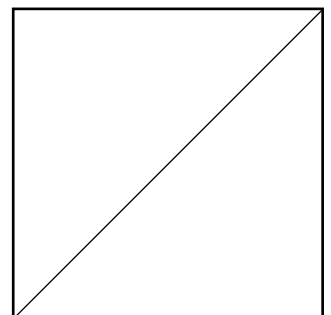
You've got this!

💡 With lots of love,
Bright Culture ❤️

If you are struggling in this paper, means you need to work harder!

If you need any professional guidance and further advice on how to advance, feel free to WhatsApp us at 91870820 or find us at www.bright-culture.com/. We are committed to connect you to your future to reach your goals.

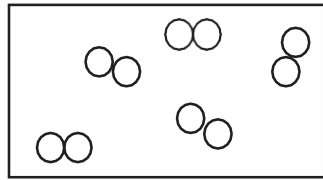
MARKS



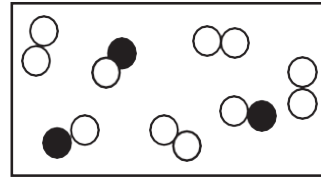
ELEMENTS MIXTURE COMPOUNDS MCQ

Paper 2 Section A

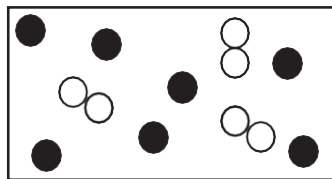
1 Which of the following diagrams shows a pure hydrogen gas?



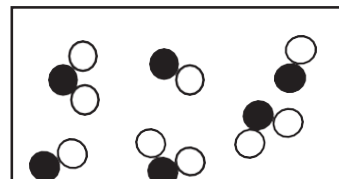
A



B

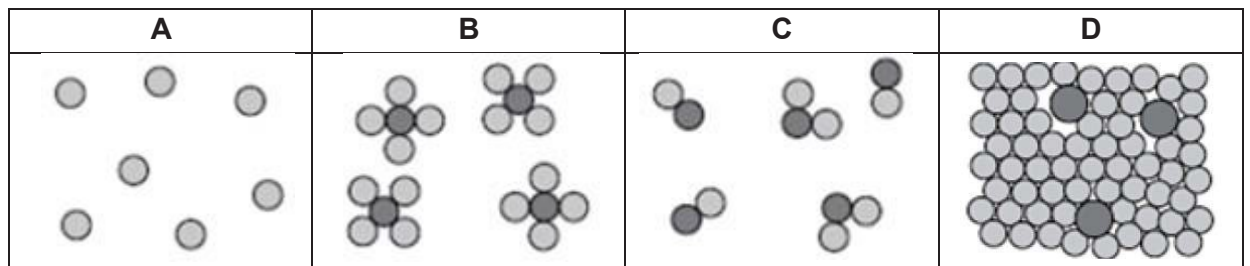


C



D

2 Which of the following diagrams represents a mixture of elements?



3 The following diagrams can be used to represent particles of substances.

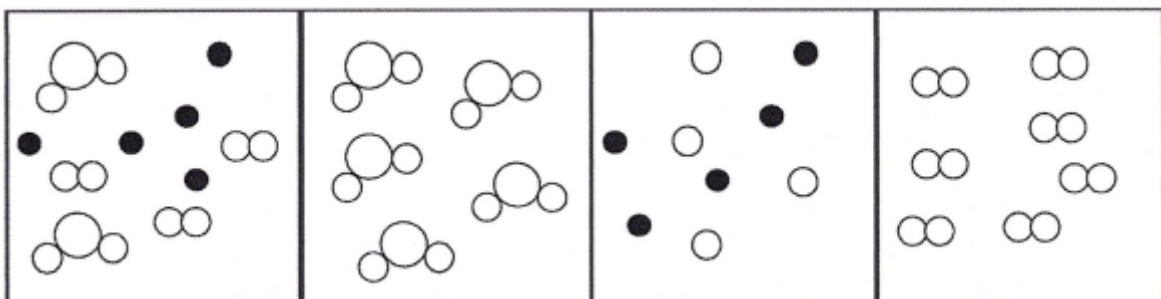


Diagram I

Diagram II

Diagram III

Diagram IV

Which option correctly describes the diagrams above?

	molecules of an element	molecules of a compound	mixture of elements	mixture of elements and compounds
A	II	IV	I	III
B	II	IV	III	I
C	IV	II	I	III
D	IV	II	III	I

4 Liquid nitrogen can be obtained by heating nitrogen crystals beyond its melting point of $-195.8\text{ }^{\circ}\text{C}$. When the nitrogen crystals melt, what will the liquid nitrogen contain?

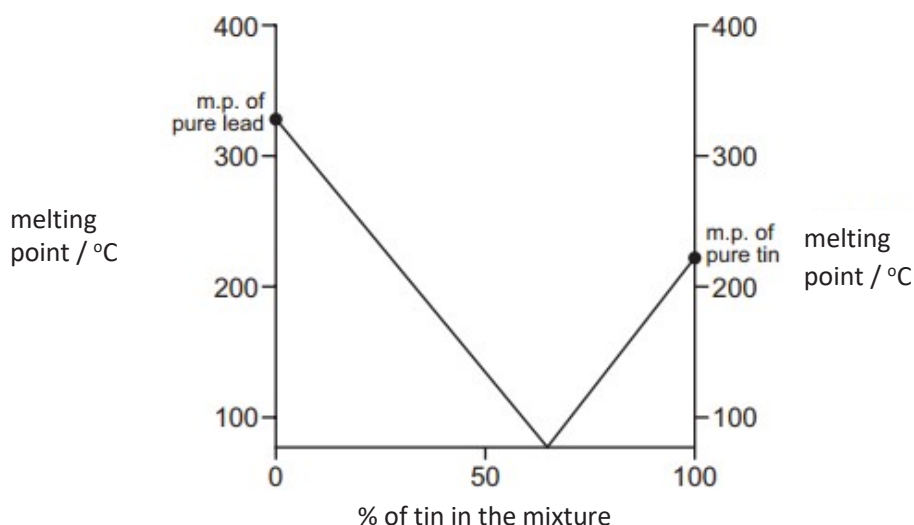
- A nitrogen atoms
- B nitrogen atoms and ions
- C nitrogen atoms and molecules
- D nitrogen molecules

5 Hexasulfur was prepared by M.R. Engel in 1891 by reacting concentrated hydrochloric acid with thiosulfate, HS_2O_3^- . It is orange-red and forms a rhombohedral crystal. It has a formula of S_6 .

What can you deduce from the information given above?

- A Hexasulfur contains only one element.
- B Hexasulfur is a compound which contains 6 atoms.
- C Hexasulfur is a compound which contains 6 elements.
- D Hexasulfur is a mixture which contains 6 elements.

6 The graph gives the melting points (m.p.) of mixtures of lead and tin.



The graph shows that any mixture of lead and tin must have a melting point that is

- A above that of tin.
- B below that of lead.
- C below that of both tin and lead.
- D between that of tin and lead.

7 Four statements are being made about elements, compounds and mixtures by a student.

Statement 1: Elements and compounds have fixed melting points.

Statement 2: The properties of a compound are similar to that of its elements.

Statement 3: A mixture can be separated into its components by physical means.

Statement 4: Elements can exist either in the form of atoms or molecules.

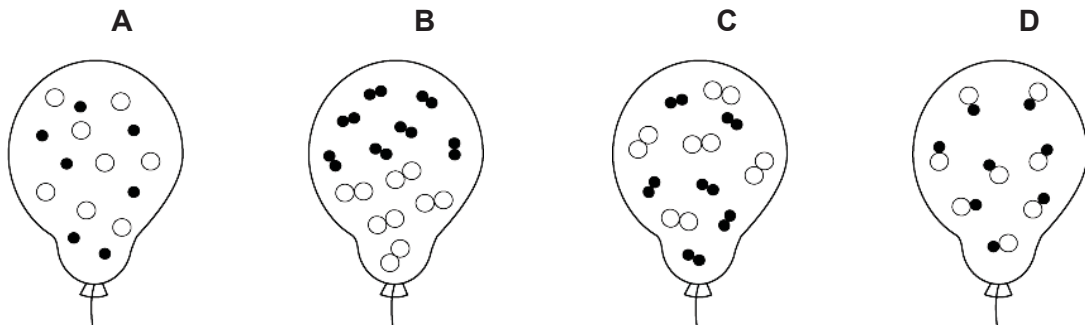
How many of the above statement(s) is/are **not** correct?

- A one
- B two
- C three
- D four

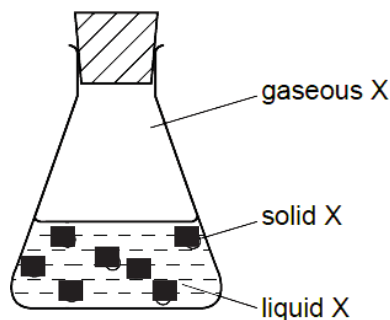
8 Which diagram shows the arrangement of particles inside a balloon containing a mixture of the gases nitrogen and oxygen?

key

- nitrogen atom
- oxygen atom



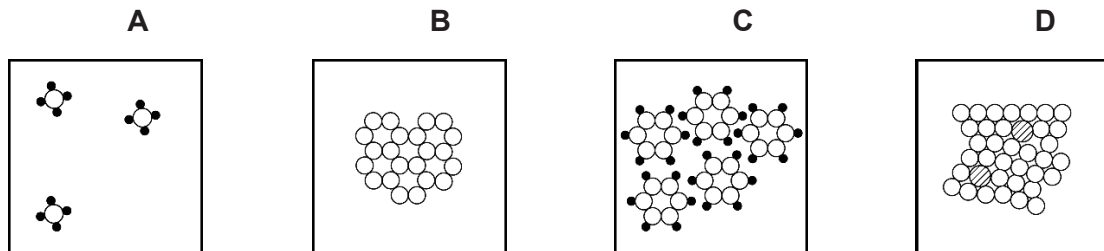
9 The conical flask contains compound X which is present in solid, liquid and gaseous states.



Which statement is correct?

- A A gaseous X molecule has a lower mass than a liquid X molecule.
- B Energy is released when X changes from liquid to solid.
- C Liquid X is at a higher temperature than solid X.
- D Liquid X molecules vibrate about fixed positions.

10 Which diagram represents the arrangement of particles in an alloy?



11 Which of the following is a set of two mixtures?

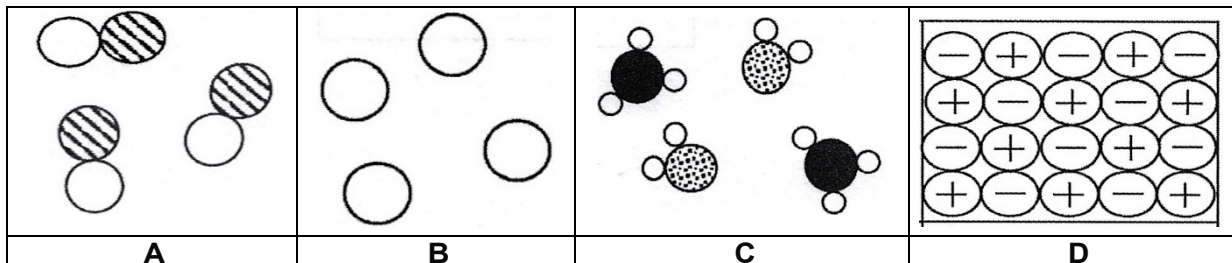
- A air, carbon dioxide
- B bronze, hydrogen
- C hydrogen chloride, seawater
- D steel, sodium chloride solution

12 Which of the following is true for covalent and ionic substances?

- | | <u>covalent</u> | <u>ionic</u> |
|----------|---------------------|---------------------|
| A | compound only | compound only |
| B | compound only | element or compound |
| C | element or compound | compound only |
| D | element or compound | element or compound |

ELEMENTS MIXTURE COMPOUNDS STRUCTURED QUESTIONS
Paper 2

1 The diagrammatic representations of four substances, **A to D**, are shown below. Only substance **D** is made up of ions, while all other substances consist of atoms. The alphabetical labels of these substances do **not** represent their chemical symbols.



Use the letters **A to D** to answer the questions that follow. You may use each letter once, more than once, or not at all.

(a) Which substance is a solid at room temperature?

.....[1]

(b) Which substance is a noble gas?

.....1]

(c) Which substance is a mixture of ammonia and water?

.....[1]

(d) Which substance contains more than two elements?

.....[1]

(e) (i) Which substance(s) is/are pure?

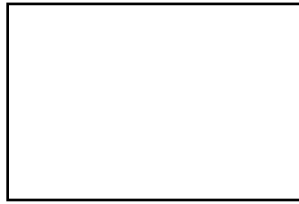
.....[1]

(ii) Suggest how you can confirm that the substance(s) in (e)(i) is/are pure.

.....

.....[1]

- (f) In the box below, draw the diagrammatic representation of nitrogen gas at room temperature.

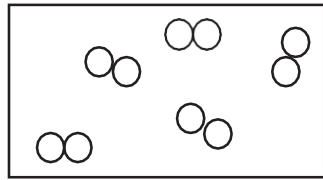


[2]
[Total:8]

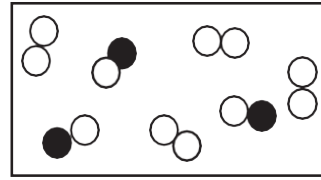
ANSWERS FOR ELEMENTS MIXTURE COMPOUNDS MCQ

Paper 2 Section A

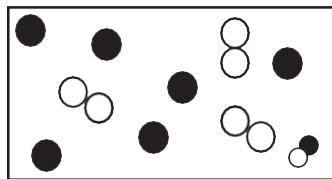
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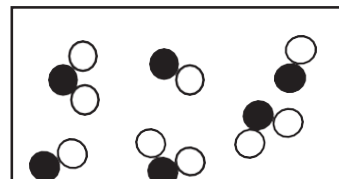
A



B

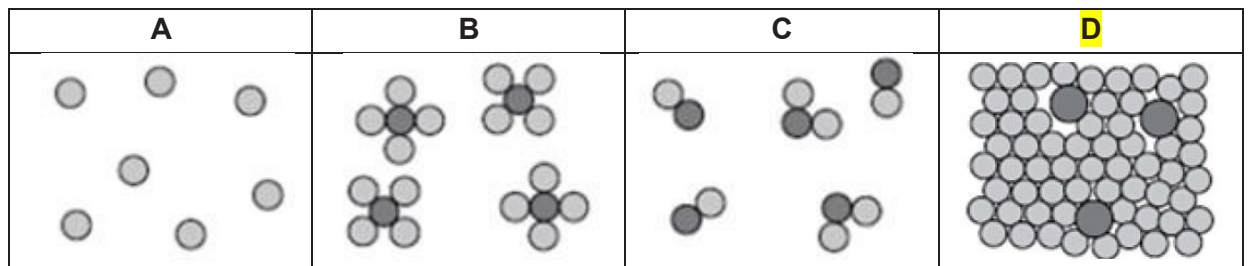


C



D

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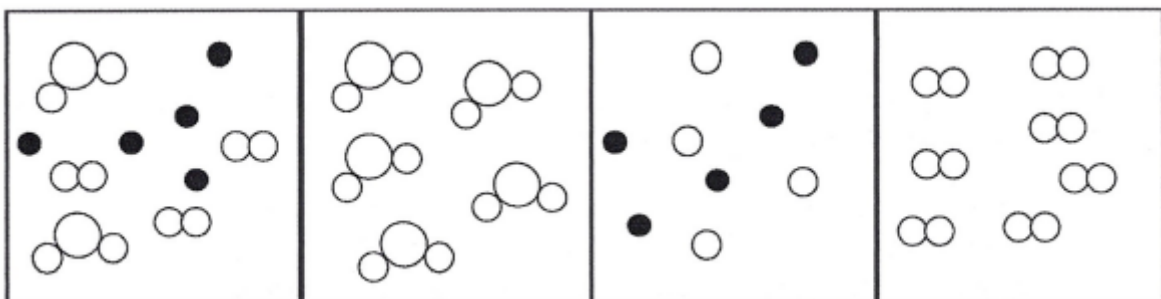


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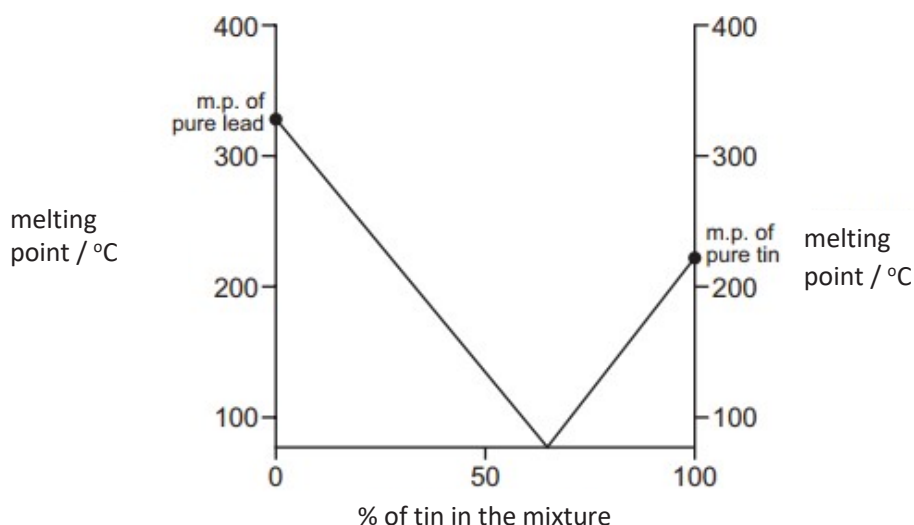
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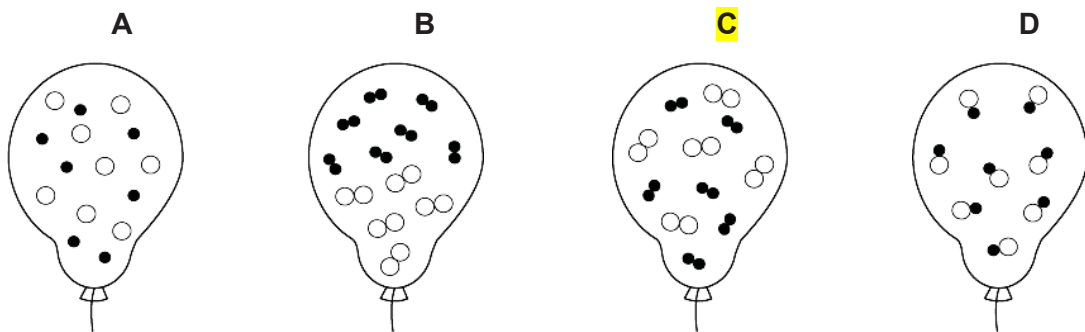
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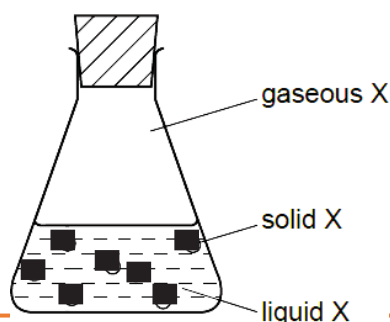
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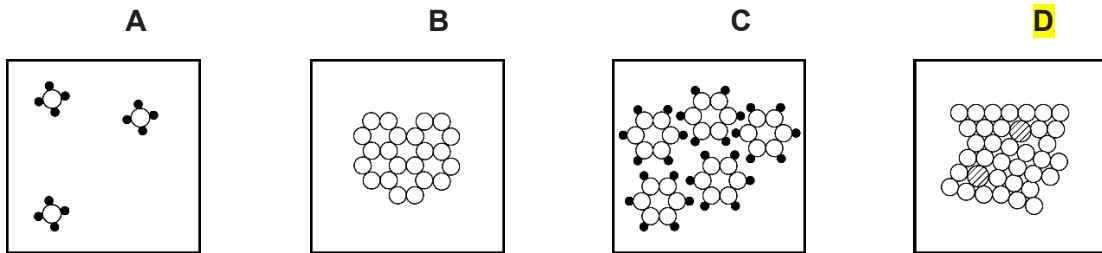
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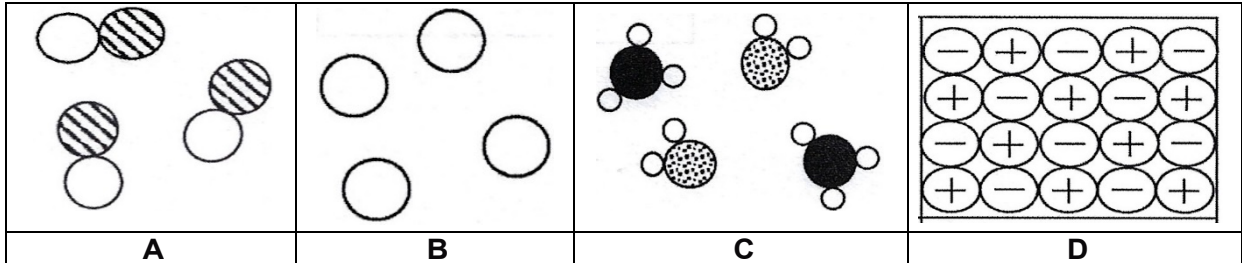
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ANSWERS FOR ELEMENTS MIXTURE COMPOUNDS
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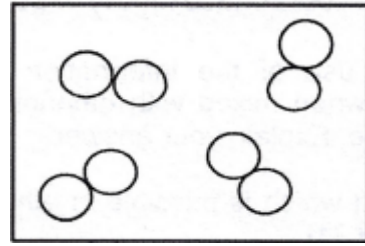
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D
[1]
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B
[1]
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C
[1]
- (d) Which substance contains more than two elements?
C
[1]
- (e) (i) Which substance(s) is/are pure?
A, B, and D
[1]
- (ii) Suggest how you can confirm that the substance(s) in (e)(i) is/are pure.

Heat the substances until they melt/boil. If they melt/boil at fixed temperatures, they are pure [1]

(f) In the box below, draw the diagrammatic representation of nitrogen gas at room temperature.

[1] - drawing shows gaseous state

[1] - drawing shows diatomic molecule



[2]
[Total:8]