

IGCSE EDEXCEL CHEMISTRY PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. What is the chemical formula of chloride ion?**
- A. Cl^-
 - B. Cl_2
 - C. ClO^-
 - D. ClO_4^-
- 2. What is the color of bromine liquid?**
- A. Red-Brown
 - B. Orange
 - C. Green
 - D. Pale Yellow
- 3. What is the chemical formula of Copper Sulphate?**
- A. CuSO_4
 - B. CuSO_3
 - C. CuS
 - D. Cu_2SO_4
- 4. Which process is gas turning into liquid?**
- A. Condensation
 - B. Boiling
 - C. Sublimation
 - D. Deposition
- 5. Increasing concentration of solutions affects the rate of reaction by which effect?**
- A. Increases
 - B. Decreases
 - C. No effect
 - D. Reverses

6. Which of the following is not a fraction obtained from fractional distillation of crude oil?
- A. Refinery gases
 - B. Gasoline
 - C. Kerosene
 - D. Ethanol
7. Describe the arrangement, movement and energy of particles in a solid.
- A. Regular arrangement, no movement, low energy.
 - B. Random arrangement, random movement, high energy.
 - C. Regular arrangement, some movement, high energy.
 - D. Random arrangement, some movement, low energy.
8. A white precipitate forms with barium chloride. This indicates the presence of which ion?
- A. Sulfate (SO_4^{2-})
 - B. Chloride (Cl^-)
 - C. Nitrate (NO_3^-)
 - D. Carbonate (CO_3^{2-})
9. Which reagent would you use to test for bromide ions by forming a cream precipitate?
- A. Silver nitrate
 - B. Barium chloride
 - C. Sodium hydroxide
 - D. Copper sulfate
10. What is a fuel?
- A. A substance that releases heat energy when it burns
 - B. A substance that cools when it evaporates
 - C. A substance that conducts electricity
 - D. A substance that dissolves in water

Answers

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1. A
2. A
3. A
4. A
5. A
6. D
7. A
8. A
9. A
10. A

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Explanations

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1. What is the chemical formula of chloride ion?

- A. Cl⁻
- B. Cl₂
- C. ClO⁻
- D. ClO₄⁻

Chlorine atoms gain one extra electron to fill their outer shell, becoming negatively charged ions called chloride. The symbol for this ion is Cl⁻—chlorine with a minus sign showing its single negative charge. The other possibilities aren't the chloride ion: Cl₂ is just a molecule of two chlorine atoms, while ClO⁻ and ClO₄⁻ are oxyanions (they include oxygen) with different numbers of atoms and different charges. So the chloride ion's formula is Cl⁻.

2. What is the color of bromine liquid?

- A. Red-Brown
- B. Orange
- C. Green
- D. Pale Yellow

Bromine liquid has a deep reddish-brown color. This comes from how Br₂ molecules absorb light: they absorb much of the blue green part of the spectrum, so the light that reaches our eyes is mainly red brown. The liquid's appearance isn't orange, green, or pale yellow because those colors would correspond to absorbing different parts of the spectrum than bromine does. In everyday lab observations, bromine's liquid consistently looks red brown, not the other options.

3. What is the chemical formula of Copper Sulphate?

- A. CuSO₄
- B. CuSO₃
- C. CuS
- D. Cu₂SO₄

To make a neutral salt, the charges of the ions must balance. Copper commonly forms Cu²⁺ and the sulfate ion carries a 2⁻ charge, SO₄²⁻. One Cu²⁺ combines with one SO₄²⁻ to balance the charges, giving CuSO₄. This is copper(II) sulfate. In many contexts you'll also see the hydrated form CuSO₄·5H₂O, which is the familiar blue crystals, but the formula without water is CuSO₄, matching the option. The other choices would imply different species—CuSO₃ would be copper sulfite, CuS is copper sulfide, and Cu₂SO₄ would not balance to a neutral compound.

4. Which process is gas turning into liquid?

A. Condensation

B. Boiling

C. Sublimation

D. Deposition

Condensation is the process where a gas becomes a liquid. When a gas like water vapour cools down or is compressed, its molecules lose energy and move more slowly. The stronger intermolecular forces pull them together, forming a liquid. You can see this in everyday life as dew on grass or fog on a cold mirror—the vapour in the air loses enough energy to turn into liquid droplets. This release of energy accompanies condensation, which is the opposite of boiling (liquid to gas). Sublimation and deposition are solid–gas and gas–solid changes, respectively, not gas–liquid.

5. Increasing concentration of solutions affects the rate of reaction by which effect?

A. Increases

B. Decreases

C. No effect

D. Reverses

Increasing the concentration makes more particles present in the solution, so they collide more often. Each collision between reactant molecules has a chance to lead to a reaction if the energy is high enough and the molecules are oriented properly. With more collisions per second (while temperature stays the same), the number of successful collisions per second rises, so the rate of reaction increases.

6. Which of the following is not a fraction obtained from fractional distillation of crude oil?

A. Refinery gases

B. Gasoline

C. Kerosene

D. Ethanol

Fractional distillation of crude oil separates the mixture into fractions based on boiling points. Lighter fractions with lower boiling points rise and are collected higher in the column as refinery gases, gasoline, and kerosene, while heavier fractions like diesel and lubricants are collected lower down. Ethanol isn't a component of crude oil and isn't produced by distilling it; it comes from fermentation (or from ethene) and is an alcohol, not a hydrocarbon fraction found in crude oil. So it does not appear as a fraction obtained from fractional distillation of crude oil.

7. Describe the arrangement, movement and energy of particles in a solid.

- A. Regular arrangement, no movement, low energy.**
- B. Random arrangement, random movement, high energy.
- C. Regular arrangement, some movement, high energy.
- D. Random arrangement, some movement, low energy.

In a solid, particles are arranged in a regular, fixed pattern and stay near their positions because the forces between them are strong. They don't flow past each other; instead, they oscillate very slightly around their spots. This limited motion means the particles have low kinetic energy. So the best description is a regular arrangement with movement only as small vibrations and with low energy. The other ideas describe looser packing, more movement, or higher energy, which would correspond to liquids or gases rather than a solid.

8. A white precipitate forms with barium chloride. This indicates the presence of which ion?

- A. Sulfate (SO_4^{2-})**
- B. Chloride (Cl^-)
- C. Nitrate (NO_3^-)
- D. Carbonate (CO_3^{2-})

When barium ions are added from barium chloride to an aqueous solution, a white solid forms only if sulfate ions are present. This happens because barium sulfate (BaSO_4) is extremely insoluble in water, so Ba^{2+} and SO_4^{2-} combine to make a solid. Chloride and nitrate ions don't give insoluble salts with barium, so no precipitate appears with those. Carbonate could also form BaCO_3 , another insoluble salt, but in standard tests the BaCl_2 reaction is used as a specific indicator for sulfate because BaSO_4 is very reliably insoluble and gives a persistent white precipitate.

9. Which reagent would you use to test for bromide ions by forming a cream precipitate?

- A. Silver nitrate**
- B. Barium chloride
- C. Sodium hydroxide
- D. Copper sulfate

The test relies on silver ions forming insoluble silver halide precipitates with halide ions, and the color of the precipitate identifies which halide is present. For bromide, the precipitate is cream-colored, produced by silver bromide. So the reagent you add to generate that cream precipitate is silver nitrate (under acidic conditions). The other reagents wouldn't give the characteristic cream AgBr precipitate with bromide—barium chloride tests for sulfate (not bromide), sodium hydroxide doesn't selectively reveal bromide via a cream precipitate, and copper sulfate isn't used for this halide test.

10. What is a fuel?

A. A substance that releases heat energy when it burns

B. A substance that cools when it evaporates

C. A substance that conducts electricity

D. A substance that dissolves in water

A fuel is a substance that stores chemical energy and releases it as heat when it burns in oxygen. The defining idea is energy released through combustion, which is why fuels are used to provide heat or power engines. When the fuel reacts with oxygen, the chemical bonds break and new bonds form in the products, releasing energy as heat (and often light). That's why this option is the best description of a fuel. The other statements describe different properties—cooling when it evaporates is an endothermic process, conducting electricity is a property of some materials, and dissolving in water is about solubility—not about releasing energy by burning.

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Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://igcseedexcelchemistry.examzify.com>

We wish you the very best on your exam journey. You've got this!

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