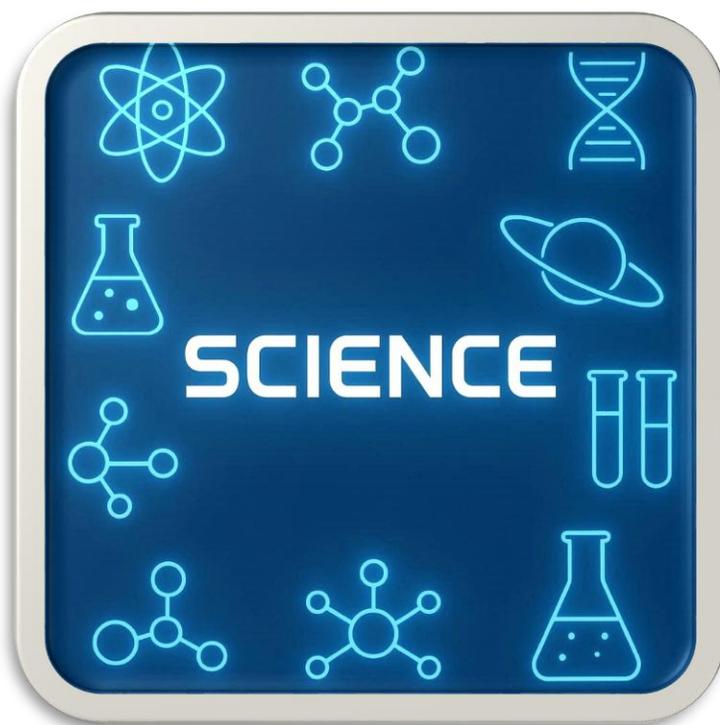


CBSE Class 10 Science Previous Year Question Papers (2016–2025) with Solutions



Complete Practice Guide for Board Exam 2026 | Physics • Chemistry •
Biology | Competency-Based Questions | Latest CBSE Pattern

Published by: **SWAN India Publication**

 **Dedication**

**To all the young explorers who look at the world — not just as it
is,
but as it could be. 🌍**

**This book is dedicated to every student who dares to ask
“Why?”,
to every mind that wonders “How?”,
and to every heart that believes “I can find the answer.”**

**Science is not just a subject —
it’s the art of curiosity, the courage to question, and the joy of
discovery.**

**Every experiment, every equation, and every observation
brings you one step closer to understanding the universe.**

**May your curiosity never fade,
your questions never stop,
and your learning never end.**

**“Somewhere, something incredible is waiting to be known.” —
Carl Sagan**

Keep exploring. Keep questioning. Keep believing.

— SWAN India Publication

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Complete Practice Guide for Board Exam 2026 | Physics • Chemistry • Biology | Competency-Based Questions | Latest CBSE Pattern

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Every effort has been made to ensure that the information contained in this book is accurate and in accordance with the **latest CBSE syllabus**. However, the author and publisher assume no responsibility for any inadvertent errors or omissions.

All question papers and solutions have been prepared and verified by **subject experts in Physics, Chemistry, and Biology** to ensure clarity, accuracy, and relevance. This book is intended solely for educational use and exam preparation.

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SWAN India Publication

Inspiring Education • Empowering Students:

Note: This edition includes **10 Years of CBSE Class 10 Science Solved Papers (2016–2025)**, carefully structured to help students prepare for **Board Exam 2026** with confidence, clarity, and conceptual understanding.

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Introduction

Science is not just a subject — it is a way of understanding the world.

It teaches us to **observe, question, experiment, and discover**. From the motion of planets to the reactions in a test tube, and from the structure of a cell to the circuits that light our homes — Science connects every part of life with logic and curiosity.

The **CBSE Class 10 Board Examination** marks an important milestone in every student’s academic journey. To perform well, students must not only learn concepts but also understand **how questions are asked, evaluated, and repeated** over the years.

This book — “**CBSE Class 10 Science Previous Year Question Papers (2016–2025) with Solutions**” — has been carefully prepared to help students achieve that clarity. It brings together **10 years of solved question papers**, covering **Physics, Chemistry, and Biology**, fully aligned with the **latest CBSE syllabus and competency-based question format** for **Board Exam 2026**.

Each question has been solved step-by-step, following the official marking scheme, so that students learn **the exact presentation style** expected in exams. The book also includes **important trends, high-weightage topics, and conceptual links** to make preparation focused and smart.

Our goal is simple — to help you:

- ✓ Recognize the **pattern** of CBSE questions,
- ✓ Strengthen your **conceptual understanding**,
- ✓ Master **time management**, and
- ✓ Build **confidence** through practice.

“Science is curiosity in action — every question is a chance to discover something new.”

This book is not just a collection of papers — it is a guide, a mentor, and a roadmap to help you learn from the past and prepare for the future.

Approach every question with an open mind, every mistake as a lesson, and every concept as a discovery.

With patience, practice, and passion — **you can master Science.**

Work hard. Stay curious. Trust your process.

— **SWAN India Publication**

How to Use This Book

This book is not just a collection of question papers — it is your **self-study companion** for mastering Science in the CBSE Class 10 Board Exam.

Follow these simple steps to make your preparation **focused, strategic, and stress-free**:

1. Start with One Chapter at a Time

Begin by revising one chapter (Physics, Chemistry, or Biology) from your NCERT textbook. Once you finish it, solve all PYQs related to that chapter from this book.

 This will help you connect concepts with actual board questions.

2. Solve Year-wise Papers Sequentially

After chapter-wise practice, move to **Year-wise solved papers (2016–2025)**. Attempt one paper at a time under exam-like conditions.

Use a timer — it helps in building real exam speed and focus.

3. Write Solutions Step-by-Step

CBSE gives marks for each step in Science answers — from formula writing to final conclusion.

Study the **stepwise solved answers** in this book to understand the correct method of presentation.

Clear steps = full marks.

4. Identify Repeated Questions

While practising, mark questions that have appeared more than once — these are your **high-weightage topics**.

 Every repetition is a hint from CBSE.

5. Learn the Pattern — Not Just the Answers

Observe how different types of questions are framed from the same concept — MCQs, assertion-reason, case-based, and descriptive.

 This will prepare you for the new competency-based format.

6. Review and Analyse Your Mistakes

After solving each paper, match your answers with the solutions given in this book.

Highlight areas where you made conceptual or calculation errors — and revise those topics again.

 Improvement comes from self-check.

7. Focus on Conceptual Clarity

Science is about **understanding, not memorizing**.

Revisit your NCERT and class notes for topics that seem confusing, and then reattempt related PYQs.

 Concept clarity = Confidence.

8. Read the Exam Tips Section Before Final Revision

At the end of this book, you'll find **Board Exam Strategy & Tips** — use it before your final tests.

It will help you manage time, attempt paper smartly, and stay calm during the exam.

“Every solved paper is a lesson from the past — and every question you practise brings you closer to success.”

Stay consistent, revise regularly, and keep testing yourself — that's the real formula for success in Science.

CBSE Class 10 Science Year 2016

◆ Section A – Very Short Answer (1 mark each)

- Q1.** When a ray of light passes from air to glass, does it bend towards or away from the normal?
- Q2.** Write the electron configuration of chlorine (atomic number = 17).
- Q3.** Write the chemical equation for the reaction of iron with copper sulphate solution.
- Q4.** Which type of mirror is used in torches?
- Q5.** Write one harmful effect of ultraviolet radiation on humans.
- Q6.** Define the term “evolution” in one sentence.
-

◆ Section B – Short Answer Type-I (2 marks each)

- Q7.** What is a neutralization reaction? Write an example.
- Q8.** A convex lens forms a real and inverted image of a candle. If the candle is moved closer to the lens, what happens to the image?
- Q9.** Write two differences between metals and non-metals based on chemical properties.
- Q10.** What is meant by the term “refraction”? Give one daily life example.

Q11. State two characteristics of a good fuel.

Q12. What is meant by 1 ohm resistance?

◆ Section C – Short Answer Type-II (3 marks each)

Q13. Explain the process of electrolysis of water with the help of a diagram.

Q14. Define homologous organs. How do they support the theory of evolution?

Q15. Draw a ray diagram for an object placed between the focus and pole of a concave mirror.

Q16. An electric current of 3 A flows through a 5 Ω resistor for 2 minutes. Calculate:

- (a) Potential difference across the resistor
- (b) Heat produced

Q17. Write any three differences between convex and concave lenses.

Q18. What are trophic levels? Why is energy flow in a food chain unidirectional?

◆ Section D – Long Answer Type (4 marks each)

Q19.

- (a) Write the modern periodic law.
- (b) How does atomic size vary in a group and period?

(c) Name the element with atomic number 11 and give its position in the periodic table.

Q20.

- (a) What is an exothermic reaction? Give one example.
- (b) State one difference between combination and decomposition reactions.
- (c) Write a balanced equation for the reaction of calcium oxide with water.

Q21.

- (a) Define Ohm's law.
- (b) Draw a graph showing the relationship between potential difference and current.
- (c) A current of 0.5 A flows through a $10\ \Omega$ resistor. Find potential difference and heat produced in 2 minutes.

Q22.

- (a) What is photosynthesis? Write its chemical equation.
- (b) Why do plants appear green in colour?
- (c) Name the organelle where photosynthesis occurs.

Q23.

- (a) What is a decomposer?
- (b) How do decomposers help in maintaining environmental balance?
- (c) Explain why energy flow is said to be "unidirectional".

Q24.

- (a) What is a prism?
- (b) Draw a ray diagram showing refraction of white light through a glass prism.
- (c) Name the phenomenon responsible for the formation of a rainbow.

Solutions – 2016

Section A

Q1. It bends *towards the normal* (because glass is denser than air).

Q2. 2, 8, 7

Q3. $\text{Fe} + \text{CuSO}_4 \rightarrow \text{FeSO}_4 + \text{Cu}$

Q4. Concave mirror

Q5. Causes skin cancer and eye cataract.

Q6. Evolution is the gradual change in living organisms over generations.

Section B

Q7. A reaction where an acid reacts with a base to form salt and water.

Example: $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$

Q8. The image becomes *larger* and moves *away* from the lens.

Q9.

Metals

Form basic oxides

Non-Metals

Form acidic oxides

Metals

Lose electrons

Non-Metals

Gain electrons

Q10. Refraction is bending of light when it enters a different medium.

Example: A coin appears raised in water.

Q11.

1. High calorific value.
2. Easy availability and pollution-free.

Q12. A conductor has resistance 1Ω if 1 A current produces 1 V potential difference.

Section C

Q13. Water splits into H_2 and O_2 gas when electricity passes through it.



(Oxygen at anode, hydrogen at cathode)

Q14. Homologous organs: Similar in structure, different in function.

Example: Forelimbs of humans and wings of bats.

They show common ancestry.

Q15. (Diagram: concave mirror, object between F and P \rightarrow virtual, erect, enlarged image formed behind mirror)

Q16.

$$I = 3 \text{ A}, R = 5 \Omega$$

(a) $V = IR = 15 \text{ V}$

(b) $H = I^2Rt = 3^2 \times 5 \times 120 = 5400 \text{ J}$

Q17.

Convex Lens

Concave Lens

Converging

Diverging

Real image

Virtual image

Used in magnifying glass Used in spectacles

Q18. Trophic level = position in food chain (producer, consumer, etc.)

Energy flow is unidirectional as energy is lost as heat and cannot return.

Section D

Q19.

(a) Properties of elements are periodic function of atomic number.

(b) Size increases down group, decreases across period.

(c) $Z = 11 \rightarrow$ Sodium, Group 1, Period 3.

Q20.

(a) Exothermic \rightarrow releases heat (e.g. combustion).

(b) Combination joins, decomposition splits.

(c) $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$

Q21.

(a) $V \propto I \rightarrow V = IR$

(b) Straight line through origin (Ohmic behavior).

(c) $V = IR = 0.5 \times 10 = 5 \text{ V}$

$$H = I^2 R t = 0.25 \times 10 \times 120 = 300 \text{ J}$$

Q22.

(a) Photosynthesis: $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2$

(b) Green pigment chlorophyll reflects green light.

(c) Occurs in chloroplast.

Q23.

(a) Decomposers break dead matter.

(b) Recycle nutrients, maintain soil fertility.

(c) Energy flows in one direction — producer \rightarrow consumer \rightarrow decomposer.

Q24.

(a) Prism: Transparent refracting device with triangular base.

(b) (Diagram showing VIBGYOR).

(c) Dispersion of light.

✓ Moral of Paper (2016 Science):

“In Science, understanding the reason is more powerful than remembering the result.”



Acknowledgment

We take this opportunity to express our heartfelt gratitude to all those who helped in bringing this book — **“CBSE Class 10 Science Previous Year Question Papers (2016–2025) with Solutions”** — to life.

First and foremost, we extend our sincere thanks to the **Central Board of Secondary Education (CBSE)** for maintaining academic excellence and continuously updating the curriculum in line with modern learning approaches. This book has been carefully structured to align with the latest CBSE guidelines and competency-based framework.

We would like to thank the **subject experts in Physics, Chemistry, and Biology** for their valuable contributions, guidance, and constant support in verifying solutions and ensuring conceptual accuracy throughout the content.

A special note of appreciation goes to the **teachers, reviewers, and academic advisors** whose insights helped us refine this edition, making it more practical and student-friendly.

We are deeply grateful to the **students and educators** across India who continue to inspire us to develop meaningful and reliable learning resources. Their curiosity, dedication, and trust motivate us to improve with every edition.

Our thanks also go to the **editorial and design team of SWAN India Publication**, who worked tirelessly to ensure that every detail — from formatting to visual presentation — meets the highest publishing standards.

Finally, we express our gratitude to every **reader, parent, and teacher** who believes in our vision —

“Inspiring Education • Empowering Students.”

Your encouragement drives us to continue creating resources that make learning simple, effective, and inspiring.

— **SWAN India Publication**

About SWAN India Publication

SWAN India Publication is committed to delivering **high-quality, reliable, and student-centered educational resources** for learners across India.

Our mission is to make education **simpler, sharper, and more result-oriented**, by combining clarity of concepts with practical exam strategies. Every book we publish is crafted with **careful research, expert guidance, and real exam insights**, ensuring that students not only learn but also understand deeply.

We believe that education is not just about passing exams — it is about building confidence, curiosity, and creativity in every learner.

Through our books, we strive to empower students with:

- ✓ clear explanations,
- ✓ exam-style practice, and
- ✓ conceptual understanding.

At **SWAN India Publication**, quality is our priority. We continuously work with experienced teachers, academic experts, and exam professionals to produce content that is **accurate, updated, and aligned with the latest CBSE guidelines**.

“Our vision is to make every student’s learning journey meaningful, modern, and motivating.”

With each publication, SWAN India aims to bring India’s young minds closer to **knowledge, confidence, and success**.

 *Learn Better. Grow Smarter. Achieve More.*