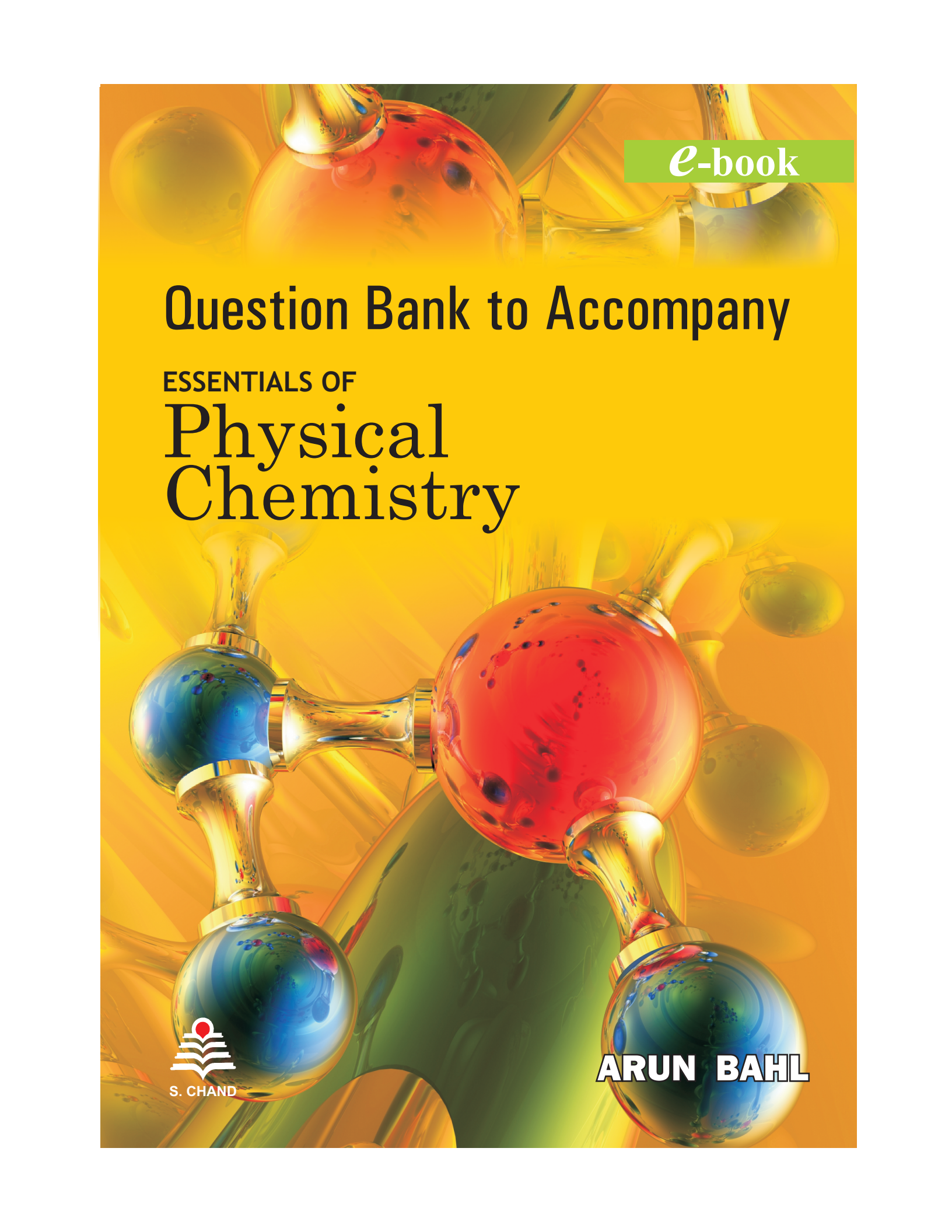


The background of the cover is a vibrant, abstract composition of laboratory glassware. It features several round-bottom flasks and beakers, some of which are filled with liquids of various colors including red, blue, and green. The glassware is arranged in a way that creates a sense of depth and movement, with some pieces in the foreground and others receding into the background. The overall color palette is dominated by warm, golden-yellow and orange tones, which give the cover a bright and energetic feel.

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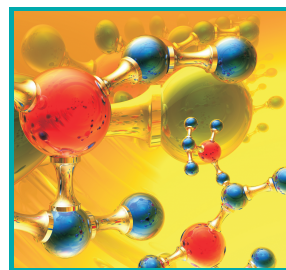
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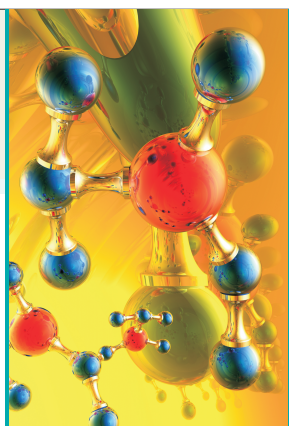


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(A Textbook for B.Sc. Classes as per UGC Model Syllabus)

ARUN BAHL

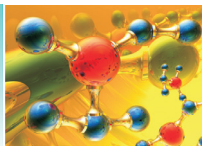
*MS (Boston), PhD (Edinburgh), CChem FRSC (London), FAIC (USA)
Professor of Organic Chemistry, Panjab University, Chandigarh*

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About this question bank

This Question Bank is a companion to the legendary textbook **Essentials of Physical Chemistry** by **Arun Bahl, B.S. Bahl and G.D. Tuli**. More than 100,00,00 students have used and learned Physical Chemistry from this book. The *Essentials of Physical Chemistry* has been a national Best-Seller for more than 65 years. This *e-book* has been written in response to repeated requests from a very large section of students and teachers.

This Question Bank is easy-to-use program that really prepares you for the exams. This *e-book* will be useful to those students who have difficulty analyzing numerical problems and find logical solutions and who have trouble with interpretation. It will also be useful to students who want additional problems and explanations in order to gain a better understanding of concepts.

Sharpen Skills

Boost Score

Build Ability

Gain Confidence

There is only one way to truly master the subject matter in Physical Chemistry—work out problems ! The more you work, the more you will learn. The grade you will receive will be reflection of your ability to solve problems. Also, be careful of how you use this *e-book*. The solutions contained in this *e-book* have been intended to provide explanations to help you understand the problem. Be sure to write out your answer to the problem first, and only then look it up to see if what you have done is correct.

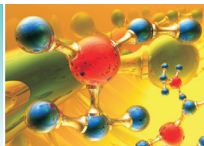
Each chapter in this *e-book* corresponds to the chapter of the *Essentials of Physical Chemistry* with the same number and title. Each chapter in this *e-book* is divided into 3 sections :

1. **Key Concepts and Equations.** These are intended to provide brief overview of the major points and topics presented in each chapter of the textbook.
2. **Additional New Solved Problems.** This Question Bank has over 600 new additional solved problems. These problems have been carefully selected from latest University Examinations and Entrance Tests.
3. **Additional Practice Problems.** This Question Bank provides more than 600 new practice problems with final answers. This section is designed to test the student's mastery of the material.

We urge you to study regularly, and hope that this Question Bank will make it easier for you to do so. Remember that the last minute studies never work !

Gaining a mastery of Physical Chemistry is hard work. It is hoped that this *e-book* will be helpful to you and that you will find your efforts rewarded.

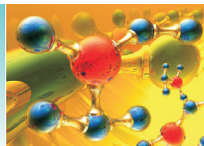
Arun Bahl



General tips on solving problems in Physical Chemistry

- ❑ Understanding concepts is the key to working problems. Read the book carefully and try to understand the relationships between various physical properties.
- ❑ Understand a problem before you try to work it. Read it carefully, and do not jump to conclusions. Do not run the risk of misinterpretation. Learn to recognize the type of problem.
- ❑ If you do not understand some words or terms in the problem, look up their meaning in the text of a dictionary. Do not just guess.
- ❑ In the case of problems that involve many words or a descriptive situation, rewrite the problem using a minimum number of words to express the bare-bones essence of the problem.
- ❑ Some problems give more information than is needed for the solution. Learn to pick out what is needed and ignore the rest.
- ❑ When appropriate, draw a simple sketch or diagram (with labels) to show how the different parts are related.
- ❑ Specifically pick out (a) What is given and (b) What is asked for.
- ❑ Look for a relationship (a conceptual principle or a mathematical equation) between what is given and what is asked for.
- ❑ Set up the problem in a concise, logical, stepwise manner, using units for all terms and factors.
- ❑ When a problem includes parentheses, do the operations inside the parentheses first.
- ❑ Think about your answer. See whether it is expressed in the units that were asked for, and whether it is reasonable in size for the information given. If not, check back and see if you can locate the trouble.





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