Preface

Understanding Physical Chemistry (Vol. -1) is published for the students of undergraduate honours course. Some major changes in the structure of the syllabus, as well as in the pattern of examination have been introduced from time to time during the recent period. Understanding Physical Chemistry (Vol. -1) is written with a completely different outlook and thought from the previous books of mine. This volume and Vol. - 2 will cover the coming syllabus of proposed four years degree course throughout the country.

In present days, students are not only engaged with their university curricula and syllabus but also take preparations for national level examinations such as N.E.T, G.A.T.E, J.A.M. for admission to post graduate courses to pursue for higher studies and research work after graduation. Therefore, it becomes difficult for them to concentrate for a longer period of time on any particular topic. Considering this, each chapter is presented in a lucid and methodical way so that a student can easily grasp the subject matter and the discussion is tailored to the needs of the undergraduate students. The book is dedicated to the legendary professor of physical chemistry, Late P.C. Rakshit whose constant inspiration led me to write this book. This is a tribute to him. The students following this book will face no difficulty in appearing for any examination.

Pedagogy

A brief summary is given point wise at the end of each chapter to facilitate revision of key concepts...

A large number of numerical problems are given in three phases but the problems are not alike and not monotonous, being of same type. In the first phase, early one- third of the problems have been fully solved mentioning the use of units at each step which most of the students usually do not follow. As a result, they are totally unaware of whether they are proceeding in the right direction. Unit balance of both sides of the equation at each step will determine the correct pathway of solving the problems. In the next phase, another one-third of the problems are given with hints or full solutions, depending on the merit of the problem with a trust that the students have learnt the utility of doing the problems with units. In the last phase, problems are given to the students for self-solving and thereby developing self-confidence.

Theoretical questions are given in four stages:

Stage-1: Multiple choice questions

Stage -2: Very short type answer type questions where for answering the question only a word is sufficient.

Stage -3: Short answer type questions where for answering the question only a sentence is enough and finally,

Stage -4: Long answer type questions which should be thought provoking for the students.

As a teacher, I feel that when a chapter is presented in this structure, students will never get scared to appear for any examination. I am sure that this book will develop an affinity within the students for physical chemistry and many of them will pursue for higher studies in physical chemistry, out of love for the subject. Finally, if any teacher or student or any reader can guide us with suggestions for improving the material from the students' perspective, I shall be delighted to consider the same.

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