
REVIEWS AND ANNOUNCEMENTS

Aspects of Ancient Indian Technology. By H. C. Bharadwaj. (Motilal Banarsidass, Delhi), 1979. Pp. xvi + 212. Price Rs. 60.00.

India was considered to be one of the industrial workshops of the ancient world for the supply of a variety of chemicals, medicines, minerals, metals, textiles and many other industrial products upto the period of industrial revolution of the West towards the end of the 18th century. India was looked to, even by Imperial Rome as the most skilled of nations manufacturing such products. The tempering of steel was brought to such perfection unknown in Europe till the middle of 19th century. In spite of such references in literature (both Indian and Foreign), to this glorious tradition, there are very few survivals of this ancient technology, currently in practice today in the country. In order to make a realistic assessment of such technological progress in earlier times, it has become imperative to reconstruct the past with the help of material sources excavated by archaeologists in addition to some scanty literature evidences. Modern scientific and multi-disciplined approach to the solution of such problems is sure to yield rich dividends. This has been well attested by the book under review.

Data collected from chemical, spectrographic, metallographic and archaeological analysis of selected antiquities, interpreted in terms of modern technological terms reveal the advanced state of ancient Indian technology and the intellectual efforts made by the earlier Indians in exploiting the natural mineral and other resources to the best of their ability. While the introductory chapter points out the role of chemistry in Archeo-technological studies, the second chapter deals with ancient Indian glass technology. Some relevant observations are made in the third chapter on the so-called Northern Black Polished Ware invented by the Ganga Valley Craftsmen. Copper, silver and gold metallurgy are covered in Chapters 4 and 5. Ancient iron metallurgy is examined under Chapter 6 which deals with the phases in the development of the technology. There are thirty photographs and figures along with 45 tables furnishing a wealth of information. Experimental procedures adopted by the author and the list of some ancient copper mines (42) of Bihar, Rajasthan and Uttar Pradesh are given in Appendix I and Appendix II respectively. The book is complete with recent bibliography and index.

With a good background of chemistry, Dr. Bharadwaj has been able to make significant contributions to the History of Science and Technology of ancient India. The author has touched some important items in Chapter 7 under the title "Emerging facts and problems". Among such problems posed is the question why India did not contribute much to the modern technological innovation. This is a vexed problem not easy to answer. A lot more is needed to assess the earlier Indian technology objectively for this purpose. A successful beginning has been made by the author to throw some light on this issue. It is a welcome addition which will be useful for the scholars interested in archaeology, metallurgy, chemistry and History of Science and Technology.

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A Biologist's Physical Chemistry, Second Edition. By J. Gareth Morris. [The English Language Book Society and Edward Arnold (Publishers) Ltd.], 1978. Pp. xiv + 390. Price: £ 1.50. (Low-Priced Edition).

This book is a popular one among undergraduate students for some time and it is reflected in the frequency of its printing. This edition is a second one and the author has done a thorough job of revision with the introduction of SI units. Though this departure of SI units causes some confusion especially for teachers and students who were used to conventional units, this reviewer is of the opinion, that only way to change the system is through such books.

The book contains twelve chapters covering the topics behaviour of gases, aqueous solutions, acids, bases and buffers, relevance of pH, thermodynamics, kinetics of chemical reactions, enzyme catalysed reaction, and oxidation-reduction. Each of the chapter is followed by a large number of problems which makes it easier for class-room teaching. The title of the book is justified in each of the worked out example and the problems. Thus, the author has fulfilled his mission in conveying what he intends to do.

The first two chapters, mathematics revision and SI units are very appropriate and this makes a good mental

preparation for students to follow the rest of the chapters. The book is well written with clarity and the physicochemical principles are outlined in a comprehensive manner. In fact, this edition could be used as a primer for any other physical chemistry course as well. The lucidity and clarity with which it is written, is very appealing and I do not have any reservation in recommending this for biologists and

medical students in our Universities. The price of the book is well within the reach of the students pocket and it is a book worth possessing.

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V. KRISHNAN.

FIRST ALL INDIA SYMPOSIUM ON ENDOCRINOLOGY OF NON-ARTHROPOD INVERTEBRATES

The above symposium is being organised in June 1980 (13th and 14th) by the Department of Zoology, Marathwada University, Aurangabad 431 004. The objectives of the symposium are to discuss the progress of research made in India in the field of neuroendocrinology of helminths, annelids, molluscs and echinoderms and to suggest future lines of research in the field. The symposium is organised in the form of lectures by the experts as well as contributed papers in the following fields:

(1) Neurosecretion in Helminthes, (2) Endocrine control of reproduction and regeneration in annelids, (3) Neuroendocrinology of bivalves, (4) Hormonal control of metabolism in gastropods, (5) Endocrine control of reproduction in gastropods and (6) Neurosecretory hormones in echinoderms. Further details can be had from Dr. V. S. Lomte, Organising Secretary, Department of Zoology, Marathwada University, Aurangabad, Maharashtra 431 004.

12th INTERNATIONAL CONGRESS OF CHEMOTHERAPY

The above Congress will be held from 19th to 24th July 1981 at Florence, Italy. Topics for the Congress are Antimicrobial, anticancer and antiviral chemotherapy as well as immunology and immunotherapy.

Abstracts should be received by 15th February 1981. For further information please write to The Secretariat, 12th International Congress of Chemotherapy, Via della Scala, 10, Florence, Italy, 50123—Florence.

NATIONAL CONFERENCE ON ENVIRONMENTAL PLANNING

It is proposed to organise a "National Conference on Environmental Planning" with international participation, in December 1980 at the Karnatak University's Post-Graduate Centre, Nandihalli. The deliberations will centre around (a) analyse the critical issues of the eco-system, (b) formulate draft proposals on issues of national policy on Environmental Planning and (c) draw up a blue print of possible Environmental Management system, Education syllabi

and model legislation. The dead line for the receipt of the title(s) of research papers or articles together with the abstract(s) will be 30th August 1980. Kindly mail titles and abstracts to Dr. B. Somasekar, Co-ordinator, National Conference on Environmental Planning, Post-Graduate Centre for Technical Studies, Karnatak University, Nandihalli—Sandur, Bellary 583 119, Karnataka, India.