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Review Article

Ashok Kumar Verma Department of Zoology, Govt. P.G. College, Saidabad Allahabad-221508 Uttar Pradesh, India

Corresponding Author: Ashok Kumar Verma

Department of Zoology, Govt. P.G. College, Saidabad Allahabad-221508 Uttar Pradesh, India E-mail: akv.apexz@gmail.com

A HANDBOOK OF ZOOLOGY: Book Review

Author: Ashok Kumar Verma

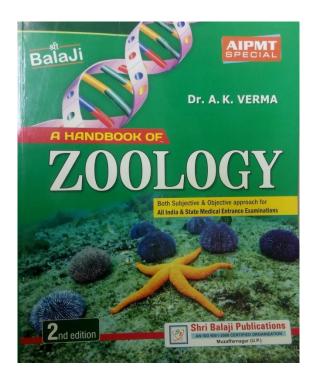
The book entitled 'A HANDBOOK OF ZOOLOGY' is published by Shri Balaji Publications, Muzaffarnagar (U.P.) in 2013. Its author Dr. A.K Verma has compiled his twenty years of experience in this book. This book is written for All India and state level medical entrance examinations. It is designed in such a manner that it not only strengthens the conceptual and application part of the subject but also helpful to improve the confidence and problem solving skills as it has strategic planning in excellent style. It provides systematic, well planned up to mark and to the point approach incorporating NCERT concept, necessary for students preparing for medical entrance examinations.

Its first edition was published in 2012 and second revised edition was published in 2013. The revised second edition of 8+624= 632 pages contains 35 chapters of Zoology in 6 units. Each chapter comprises subject matter in brief, along with point wise description, supported by suitable diagrams and examples. This is followed by sufficient number of objective type questions with answer of the same at the end of the page. Its revision and updation into a new improved second edition undoubtedly demonstrates the interest of readers, devotion of author and in turn success of the book.

Unit-I (**Diversity in the Living World**) describes the properties of living beings, systematics and rules of taxonomy including kingdom systems and various phyla from Porifera to Chordata. In first chapter, an outline of animal classification, concise description of coelom and salient features of different phyla are also given. In addition, domestication of animals is also described. This unit comprises 14 chapters from chapter 1-14 as following:

- 1. Living Organisms and Systematics
- 2. Kingdom Protista
- 3. Phylum 1. Porifera
- 4. Phylum 2. Coelenterata
- 5. Phylum 3. Ctenophora
- 6. Phylum 4. Platyhelminthes
- 7. Phylum 5. Aschelminthes
- 8. Phylum 6. Annelida
- 9. Phylum 7. Arthropoda
- 10. Phylum 8. Mollusca
- 11. Phylum 9. Echinodermata
- 12. Phylum 10. Hemichordata
- 13. Phylum 11. Chordata
- 14. Domestication of Animals

Unit-II (**Histology and Immunology**) describes four basic types of tissues found in animals *namely* epithelium, connective, muscular and nervous and integumentary system including skin and its derivatives. Different types of immunity, human immune system, immune response mechanism, antibodies and their types, allergy, inflammation, organ transplantation, immunization, ageing, cancer etc. are also described in this unit.



Acquired immuno deficiency syndrome (AIDS) is described in detail. This second unit comprises 2 chapters from chapter 15-16. Names of these chapters are:

- 1. Animal Tissues and Skin
- 2. Immune System

Unit-III (**Human Anatomy and Physiology**) describes anatomy and physiology of different mammalian systems with special reference to human. It comprises 7 chapters from chapter 17-23. These chapters are as following:

- 1. Digestive system
- 2. Respiratory system
- 3. Circulatory system
- 4. Excretory system
- 5. Skeletal system
- 6. Nervous system
- 7. Chemical co-ordination and Regulation

Unit-IV (Human Reproduction) describes reproductive system, physiology of reproduction and embryonic development of human. Moreover, reproductive health, infertility and assisted reproductive technologies (ARTs), test tube baby, amniocentesis, MTP, sterilization and contraception

(birth control measures) are also a part of this unit. Different types of birth control measures are nicely represented in tabular form. It comprises 3 chapters from chapter 24-26 namely:

- 1. Reproduction
- 2. Embryonic Development
- 3. Reproductive Health

Unit-V (**Origin and Evolution of Life**) describes how life is originated on the earth. Theories and evidences of organic evolution, geological time scale, human evolution, population genetics, genetic drift, speciation, different types of natural selection etc. are included in this unit. It comprises 5 chapters from chapter 27-31:

- 1. Origin of Life
- 2. Theories and Evidences
- 3. Geological Time Scale
- 4. Human Evolution
- 5. Population Genetics and Natural Selection

Unit-VI (Genetics and Biotechnology) describes Mendelian genetics, genetical terminology, gene interaction, linkage, crossing over, different types of sex determining mechanisms, haploid genetics, human genetics (human karyotype, sex determination, sex linked inheritance, sex limited inheritance, sex influenced inheritance, syndromes, Barr body and Lyon's hypothesis, inborn errors, sickle cell disease, ABO blood grouping, eugenics etc.), molecular biology (DNA, RNA, replication, flow of genetic information and central dogma, genetic code, translation, transcription, teminism, regulation, mutation etc). Moreover, genetic engineering, biotechnologies are also described with processes and applications. This last unit comprises 4 chapters from chapter 32-35 as following:

- 1. Genetics
- 2. Human Genetics
- 3. Molecular Biology
- 4. Processes and Applications of Biotechnology

The handbook reviewed above is therefore up-to-date and ultimate on the subject. Anyone can understand Zoology with the help of this book and can get success in completion easily as it comprises a lot of valuable, useful and updated material to subject as well, as objective type questions in simple language.

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