

Economic Zoology Of Shukla Upadhyay

CELL BIOLOGY1. The Cell 2. Microscopy 3. Protoplasm 4. Cell Membrane 5. Mitochondrion 6. Golgi Complex7. Endoplasmic Reticulum 8. Ribosomes9. Lysosomes10. Centrosome 11. Plastids 12. Cilia, Flagella and Basal Bodies 13. Nucleus 14. Chromosomes 15. Nucleic Acids 16. Cell Reproduction : Mitosis 17. Cell Reproduction : Meiosis 18. Biology of Cancer 19. Cellular Basis of Immunity DEVELOPMENTAL BIOLOGY1. Historical Perspective, Aims and Scope of Developmental Biology2. Gametogenesis3. Fertilization4. Types of Patterns of Cleavage5. Blastulation and Fate Maps in Frog and Chick6. Gastrulation in Frog.

The risks and consequences of environmental change are increasing, leading to massive losses in terms of ecosystems and having a huge impact on human populations. As such, global thinkers, environmentalists, scientists and policy makers are focusing on finding solutions and ways to sustain life on Earth. Anthropogenic impacts on the climate system can only be mitigated by the restoration of existing natural resources and the sustainable development of the environment and society. This book discusses the potential of green technology in waste management, wetland restoration, presenting the latest developments in the field of bioenergy, green ecology, bioremediation and microbial management. Wetlands are one of Earth's most important ecosystems, and they provide valuable services to human societies, such as minimizing the impacts of floods, acting as a carbon sink, and offering water purification as well as recreational opportunities. Wetlands may be natural or constructed, and the effectiveness of wetland services largely depends on the diversity of macrophytes affecting the algal production, plant biomass and nutrient status of the system. In addition, they are one of the richest microbial ecosystems on earth: the rhizosphere, soil and water interface enhances wetland services with implications ranging from phytoremediation to microbial bioprospection. However, in order to function properly, they need to be effectively redesigned, reengineered, protected and maintained. The book addresses the dynamic relation between three global concerns: environmental pollution, resource exploitation and sustainability. It describes the utilization of resources like wastes (municipal, industrial, agricultural, mine drainage, tannery, solid, and e waste), plants, algae and microbes for production of renewable biofuel, biofertilizers and other value added products to achieve the goal of sustainable development. The book also discusses the current and future trends in employing wetlands in improving water quality. In addition it presents the latest international research in the fields of wetland science, waste management, carbon sequestration and bioremediation. Highlighting a broad spectrum of topics and strategies for achieving a sustainable environment, the book offers researchers, students and academics insights into utilizing resources in a sustainable way.

This well-accepted book, now stands in its second edition, is a time-honoured revision and extension of the previous edition. Beginning with an introduction to the study of animal behaviour, the book explains the various aspects of behavioural biology incorporating a wealth of information from molecular biology, neurobiology, and socio-biology with a new approach. It describes different kinds of innate and learned behaviours, animal communications, defensive behaviours such as camouflage and mimicry with suitable illustrations. The book incorporates the introductory concepts of biomimicry in an attractive manner. Further, it discusses biorhythms, migration in fish and birds, in addition to evolution and physiological basis of migration. The text also presents the important aspects of socio-biology and social behaviours, such as feeding, adaptation, prey defence, territoriality, aggression, altruism, sexuality, and parental care. Finally, it provides discussions on behavioural ecology in the context of conservation biology, and human behaviour. The book presents the basic principles of animal behaviour with the aid of carefully selected examples from both the recent and classic literature along with an emphasis on readability. In the present edition, topics like eusociality and behavioural theories have been incorporated. This edition also includes as many as 11 published articles by the author on different topics related to the subject matter in box format to further strengthen the text. The book is primarily intended for the students of B.Sc./M.Sc. (Zoology/Life Science) for their courses. It would be useful for the researchers in the field of animal behaviour, and conservation biologists. It would also attract readership studying Sociology and Anthropology. KEY FEATURES : Presents a well-balanced view of ethology. Discusses the current development in the field. Includes a glossary of important terms. Offers end-of-chapter questions to check the students' understanding of the concepts.

Our Earth is considered as a natural system which organizes and controls itself. However, the present scale of anthropogenic activity is unprecedented in the history of mankind compelling the intelligentia to ponder over the scientific causes of the problems, processes and sustainable and pragmatic solutions. The current rate of resource use and consumption pattern are depleting the planet's finite resources and damaging life-supporting ecosystems. A large number of toxic substances are increasingly found in air, water, soil, and flora and fauna. We are in the midst of a period of increasing interconnected and complex global challenges that seek action across temporal and spatial scales, diverse sectors, and concerted efforts from global citizens. The environment on account of human's action has been experiencing imbalances and ecological catastrophe. Environmental issues like global climate change, biodiversity loss, the rapid depletion of natural resources, degradation of global commons, stratospheric ozone depletion have been restricting the safe operating space and transgressing the planetary boundaries endangering the existence of human societies. The global environmental problems if not scientifically managed may end up in the civilizational collapse. Nevertheless, the underlying commonality among these environmental issues is interrelatedness, complexity, and difficulty in identifying and implementing solutions. The global environmental challenges can be managed by adopting sustainable green technologies which dovetails the principles of environmental sustainability with social and ecological sustainability. Green growth is construed as a new development paradigm that sustains economic growth while at the same time ensuring environmental sustainability.

Recently Applied and Economic Zoology has been included in national syllabus by UGC for undergraduates. The book examines insect pests, animal pests, natural enemies, beneficial insects, beneficial animals, agricultural chemicals and more. The current book is blueprint for undergraduate students to aware about our natural wild life and its economic importance. The book contains four chapters with illustrations and boxed materials. In the chapter 1, we have covered parasitology, in which we have deliberately discussed about parasites of domestic animals and human, structures, life cycles, pathogenicity, diseases, symptoms and it control. In chapter 2, we consciously talk about vectors and pests. Here, we covered life cycle and control of pest and vectors such as Gundhi bug, Sugarcane leafhopper, Rodents, Termites and Mosquitoes. Chapter 3 is about animal breeding and animal cultures. In this, we started with basic introduction about breeding and culture, difference between them and then detailed discussion about Animals and Human Society, Animal Breeding, Genetic engineering applications in

Animal Breeding, Breeding and Variation, Aquaculture, Pisciculture, Poultry farming, Sericulture, Apiculture, Lac-culture. The last chapter has wild life of India. In this chapter we provided detail for Wild Life Protection and Acts, Documentation of Wild Life, Rare, Endangered and Endemic species, Protected Area Network, Conservation of Wild Life, In-situ and Ex-situ conservation.

1. Introduction to the Study of Animal Behaviour 2. Concepts of Ethology 3. Methods of Studying Behaviour 4. Mammalian Nervous System and Behaviour 5. Pheromones 86-108 6. Hormones and Behaviour 7. Biological Clocks 8. Orientation 9. Bird Migration and Navigation 10. Fish Migration 11. Social Organization 12. Wildlife 10 India Glossary Supplementary Reading Contents: Introduction, Vermiculture, Apiculture, Sericulture, Lac Insect and Lac Culture, Agricultural Pests and their Control.

This book aims to provide up-to-date information's on economic aspects of insects, because they are always considered as harmful by mankind. But it is quite interesting to note that there are various insects which are of economic importance and they provide useful product. This book covers selected subjects/topics which are useful for students, researchers and for those working on various aspects of economic entomology.

When animals communicate with one another, they follow a certain pattern of behavior. The scientific study of the characteristic behavior patterns and the study of Animal behavior and social organization from a biological perspective are known as the Ethology, i.e., Ethology (ethos = habit, and logos = study, deals with the study of animal behavior) is the special branch of biology that analyzes the reaction of an animal to its environment, trying to determine specific cause and effect relationship between the animal action and events and condition experienced by the Animals.

The book contains 150 papers on Ethnobotany, Medicinal Plants and Economic Plant of Indian Sub-continent.

BIOPROSPECTING OF PLANT BIODIVERSITY FOR INDUSTRIAL MOLECULES A comprehensive collection of recent translational research on bioresource utilization and ecological sustainability Bioprospecting of Plant Biodiversity for Industrial Molecules provides an up-to-date overview of the ongoing search for biodiverse organic compounds for use in pharmaceuticals, bioceuticals, agriculture, and other commercial applications. Bringing together work from a panel of international contributors, this comprehensive monograph covers natural compounds of plants, endophyte enzymes and their applications in industry, plant bioprospecting in cosmetics, marine bioprospecting of seaweeds, and more. Providing global perspectives on bioprospecting of plant biodiversity, the authors present research on enzymes, mineral micro-nutrients, biopesticides, algal biomass, and other bioactive molecules. In-depth chapters assess the health impacts and ecological sustainability of the various biomolecules and identify existing and possible applications ranging from ecological restoration to production of essential oils and cosmetics. Other topics include, bio-energy crops as alternative fuel resources, the role of plants in phytoremediation of industrial waste, and the industrial applications of endophyte enzymes. This comprehensive resource: Includes a through introduction to plant biodiversity and bioprospecting Will further the knowledge of application of different plants and improve research investigation techniques. Summarizes novel approaches for researchers in food science, microbiology, biochemistry, and biotechnology Bioprospecting of Plant Biodiversity for Industrial Molecules is an indispensable compendium of biological research for scientists, researchers, graduate and postgraduate students, and academics in the areas of microbiology, food biotechnology, industrial microbiology, plant biotechnology, and microbial biotechnology.

Arthropods are invertebrates that constitute over 90% of the animal kingdom, and their bio-ecology is closely linked with global functioning and survival. Arthropods play an important role in maintaining the health of ecosystems, provide livelihoods and nutrition to human communities, and are important indicators of environmental change. Yet the population trends of several arthropods species show them to be in decline. Arthropods constitute a dominant group with 1.2 million species influencing earth's biodiversity. Among arthropods, insects are predominant, with ca. 1 million species and having evolved some 350 million years ago. Arthropods are closely associated with living and non-living entities alike, making the ecosystem services they provide crucially important. In order to be effective, plans for the conservation of arthropods and ecosystems should include a mixture of strategies like protecting key habitats and genomic studies to formulate relevant policies for in situ and ex situ conservation. This two-volume book focuses on capturing the essentials of arthropod inventories, biology, and conservation. Further, it seeks to identify the mechanisms by which arthropod populations can be sustained in terrestrial and aquatic ecosystems, and by means of which certain problematic species be managed without producing harmful environmental side-effects. This edited compilation includes chapters contributed by over 80 biologists on a wide range of topics embracing the diversity, distribution, utility and conservation of arthropods and select groups of insect taxa. More importantly, it describes in detail the mechanisms of sustaining arthropod ecosystems, services and populations. It addresses the contribution of modern biological tools such as molecular and genetic techniques regulating gene expression, as well as conventional, indigenous practices in arthropod conservation. The contributors reiterate the importance of documenting and understanding the biology of arthropods from a holistic perspective before addressing conservation issues at large. This book offers a valuable resource for all zoologists, entomologists, ecologists, conservation biologists, policy makers, teachers and students interested in the conservation of biological resources.

Product Dimensions: 21x15x3 cm. 10 edition. Contents: CONTENTS:1.Introduction 2.Cellular Basis of Development 3.DNA, RNA and Protein Synthesis 4.Male Gonads and Spermatogenesis 5. Female Gonads and Oogenesis 6.Semination, Ovulation and Transportation of Gametes 7.Reproductive Cycles . Fertilization 8 Parthenogenesis 9 Cleavage and Blastulation - Nucleus and Cytoplasm in Development 10 Fate Maps and Cell Lineage, Gastrulation , Neurulation, Morphogenesis and Growth 11 Embryogenesis of a Simple

Ascidian - Embryogenesis of Amphioxus 12 Embryogenesis of Frog 13. Detailed Account of Organogenesis of Frog | Embryogenesis of Chick. 14 Early Embryogenesis of Eutherian Mammal 15 Rabbit Placenta and Placentation 16 Gradient Theory | Embryonic Inductions and Competence 17 Differentiation Asexual Reproduction and Blastogenesis 18 Regeneration 19 Metamorphosis 20 Teratogenesis 21 Birth Control 22 Impotency, Sterility, Artificial Insemination, Test-tube Baby and GIFT, Glossary 23 Selected Reading 24 Index.

The book provides discussion on all aspects of Invertebrates as covered in Practical Zoology. Beginning with general techniques of preparation of cultures of Protozoa, microscopic slides and laboratory reagents, it also covers in tabular and detailed form, recent classification of various invertebrate phyla with examples of each order or suborder. Wide coverage of each phylum, and diagrams of major and minor dissections make the book equally useful for both undergraduate and postgraduate students.

1. Introduction 2. Climatic and Topographic Factors 3. Edaphic Factors (Soil Science) 4. Biotic Factor 5. Ecological Adaptations 6. Autecology of Species 7. Population - Structure and Dynamics 8. Community-Structure and Classification 9. Community Dynamics (Ecological Succession) 10. Ecosystem: Structure and Function 11. Habitat Ecology 12. Degradation of Natural Resources and the Environmental Problems 13. Energy Crisis and Non-Conventional Sources 14. Biodiversity and Wildlife of India and its Conservation 15. Environment and Development-India's Viewpoint 16. Global Warming and Climate Change 17.

Parasitism is a natural way of life, among the large number of organisms and parasitic diseases are the major public health problem, which results into morbidity and mortality in tropical countries, particularly in the socioeconomically underdeveloped societies in the world. Food, water and soil-borne infections are estimated to be affecting almost half of the world's population. Zoonoses (i.e. diseases that are transmittable between animals and men) of parasitic origin contribute to this statistics by affecting human health and causing heavy losses directly or indirectly to economy.

1. Economically Important Phytoparasitic Nematodes 2. Insect Pests of Some Economically Important Crops 3. Some Important Parasites and Pests 4. House Hold Insects 5. Mites and Ticks 6. Apiculture 7. Lac Culture 8. Sericulture 9. Edible Fresh Water Fishes 10. Fish Culture 11. Economic Importance of Fish 12. Fish Diseases 13. Poultry 14. Dairy Farming 15. Rat Menace and Its Control BIostatistics 1. An Introduction to Biostatistics 2. Graphic Representation of Frequency Distribution 3. Measures of Central Tendency 4. Measures of Validity 5. Normal Distribution Log/ Antilog Tables ANIMAL BEHAVIOUR 1. Introduction and Significance of Study of Animal Behaviour 2. Concepts and Patterns 3. Approach and Methods 4. Communication 5. Reproductive Behaviour in Animals: Courtship and Mating 6. Aggressive and Territorial Behaviour 7. Parental Behaviour 8. Behavioural Genetics

For B.Sc. and B.Sc(hons.) students of all Indian Universities & Also as per UGC Model Curriculum. The multicoloured figures and arrestingly natural photographs effectively complement the standard text matter. The target readers shall highly benefit by correlating the content with the multicoloured figures and photographs. The book has been further upgraded with addition of important questions: long, short, very short and multiple questions in all chapters. A complete comprehensive source for the subject matter of various university examinations.

Aquaculture, farming of aquatic animals and plants, is one of the world's fastest growing food production systems. This text provides an excellent elucidation of the concepts of aquaculture along with its impact on the environment. Written in a style that makes the subject both interesting to read and easy to understand, this text describes the scope and principles of aquaculture, and the design and management of a typical aquaculture/fish farming. It explains different types of culture systems and practices, as well as different criteria for the selection of species for culture. The text discusses some common diseases in aquaculture and measures to prevent them. It further elaborates the importance of a balanced diet for aquatic species and focuses on harvesting and post-harvesting technology. Biotechnology has gained immense importance in recent years and it is now applied to aquaculture for improvement of aquatic species. This book discusses in detail the role of biotechnology in aquaculture. In addition, it deals with different aquaculture practices in India, such as culture of carp, prawn, pearl and seaweed. The text concludes with a discussion on the effects of aquaculture practices on the environment. Key Features Provides a list of major important aquaculture species cultured worldwide. Presents the latest data to enhance the utility of the text. Gives special emphasis on aquaculture practices in India. The book is intended for undergraduate and postgraduate students of zoology (B.Sc. and M.Sc.) and fisheries (B.F.Sc. and M.F.Sc.). It will also be useful to aquaculturists and environmentalists.

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