Diversity of Chordates

CONTENTS

Chapter		Pages
1	Introduction to chordates	1-15
	General characteristics and outline classification of Phylum	
	Chordata up to classes, Taxonomy	
2	Protochordata	16-44
	❖ General characteristics and classification of Sub-Phylum	
	Hemichordata, Urochordata and Cephalochordata up to	
	classes.	
	* Retrogressive metamorphosis in Ascidia. (Urochordata)	
	❖ General organization of Branchiostoma, Advanced features	
	of vertebrates over Protochordates.	
3	Origin of Chordata	45-59
	❖ Dipleurula concept and the Echinoderm theory of origin of	
	chordates.	
4	Agnatha	60-68
	 General characteristics and classification of Cyclostomata 	
	up to orders.	
	❖ Metamorphosis in Petromyzon.	
	❖ Zoobgical importance of ammocoete larva.	
5	Pisces	69-117
	 General characteristics and classification of Chondrichthyes 	
	and Osteichthyes up to sub-classes.	
	❖ Dipnoi: Distribution, morphology & affinities.	
	❖ Swim bladder in fishes, Osmoregulation.	
	❖ Accessory respiratory organs in fishes.	

Migration of fishes.Parental care in fishes.

6	Amphibia	118-138
	 General characteristics and classification up to extant orders. 	
	❖ Parental care in Amphibia, General characters, distribution	
	& Affinities of Sphenodon.	
	❖ Metamorphosis in Bufo.	
	❖ Neoteny and paedogenesis.	
7	Reptilia	139-162
	❖ General characteristics and classification up to extant orders.	
	❖ Poison apparatus and biting mechanism of snakes.	
	❖ Differences between poisonous & non-poisonous snakes.	
	❖ Types of snake venom & their mode of actions.	
8	Aves	163-207
	 General characteristics and classification up to sub-classes. 	
	❖ Exoskeleton (in relation to feathers).	
	❖ Double respiration in birds. Achacopterynx general character	
	and Phylogenetic importance.	
	Principles and aerodynamics of flight.	
	Migration of birds.	
	Fyling and perching mechanisms in birds.	
9	Mammals	208-255
	❖ General characters and classification up to extant orders.	
	❖ Exoskeletal derivatives of mammals.	
	Echolocation in Microchiroptera (Bats) and Cetacea.	
10	Zoogeography	256-309
	❖ Zoogeographical realms.	
	❖ Plate tectonic and Continental drift theory.	
	❖ Distribution of birds and mammals in different realms.	
11	Practical	310-388
	Study of Museum specimens of Protochordata to Mammalia.	
	❖ Key for identification of poisonous and non-poisonous	
	snakes.	
	❖ Mounting: Fish scales & pecten from fowl head.	
	Study of slides of histology of Amphioxus.	
	References	389-392