

COMPARATIVE ANATOMY OF VERTEBRATES

Paper 9

THEORY	(48 Periods)
Unit 1: Integumentary System	(6)
Structure, functions and derivatives of integument	
Unit 2: Skeletal System	(8)
Overview of axial and appendicular skeleton, Jaw suspensorium, Visceral arches	
Unit 3: Digestive System	(6)
Alimentary canal and associated glands	
Unit 4: Respiratory System	(6)
Skin, gills, lungs and air sacs; Accessory respiratory organs	
Unit 5: Circulatory System	(6)
General plan of circulation, evolution of heart and aortic arches	
Unit 6: Urinogenital System	(4)
Succession of kidney, Evolution of urinogenital ducts, Types of mammalian uteri.	
Unit 7: Nervous System	(7)
Comparative account of brain	
Autonomic nervous system, Spinal cord, Cranial nerves in mammals	
Unit 8: Sense Organs	(5)
Classification of receptors: Brief account of visual receptors, chemo-receptors and mechanoreceptors	

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PRACTICAL

Dissections:

1. Temporary mount of placoid, cycloid and ctenoid scales.
2. Weberian ossicles and air bladder of *Mystus*
3. V and VII cranial nerves of *Scoliodon*
4. IX and X cranial nerves of *Scoliodon*

Osteology:

1. Disarticulated skeleton of Frog, *Varanus*, Fowl, Rabbit
2. Carapace and plastron of turtle /tortoise
3. Mammalian skulls: One herbivorous and one carnivorous animal.

ESSENTIAL READINGS

- Kardong, K.V. (2005) *Vertebrates' Comparative Anatomy, Function and Evolution*. IV Edition. McGraw-Hill Higher Education.
- Kent, G.C. and Carr R.K. (2000). *Comparative Anatomy of the Vertebrates*. IX Edition. The McGraw-Hill Companies.
- Weichert C.K and William Presch (1970). *Elements of Chordate Anatomy*, Tata McGraw Hills

SUGGESTED READINGS

- Hilderbrand, M and Gaslow G.E. *Analysis of Vertebrate Structure*, John Wiley and Sons.
- Walter, H.E. and Sayles, L.P; *Biology of Vertebrates*, Khosla Publishing House.