**General Characters of Chondrichthyes**

**B.Sc. Part-1, Paper- II, Group-B**

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The class Chondrichthyes is the group of Cartilaginous fishes which include the Sharks, Skates, Rays and Chimaeras. The group comprises more than 700 species. The group is characterised by the presence of skeleton made up of soft flexible cartilage lined with hard tissue.

**General Characters**

1. Mostly marine and predaceous.
2. Body fusiform or spindle shaped.
3. Fins both median and paired, all supported by fin rays. Pelvic fins bear clasper in males. Tail heterocercal.
4. Skin tough containing minute placoid scales and mucous glands.
5. Endoskeleton entirely cartilaginous. Notochord persistent. Vertebrae complete and separate. Pectoral and pelvic girdles present.
6. Mouth ventral. Jaws present. Teeth are modified placoid scales. Stomach J shaped. Intestine with spiral valve.
7. Respiration by 5- 7 pairs of gills. Gill-slit separate and uncovered. Operculum absent. No air bladder and lungs.
8. Heart-2 chambered one auricle and one ventricle. Sinus venosus and conus arteriosus present. Both renal and hepatic portal system present. Temperature variable, poikilothermous.
9. Kidney opisthonephric. Excretion ureotelic. Cloaca present.
10. Brain with large olfactory lobe and cerebellum. Cranial nerves ten pairs.
11. Olfactory sacs do not open into pharynx. Membranous labyrinth with 3 semi-circular canals. Lateral line system present.
12. Sexes separate. Gonads paired. Gonoducts open into cloaca. Fertilization internal.
13. Oviparous or ovoviviparous, eggs large, yolky. Cleavage meroblastic. Development direct, without metamorphosis.