Classification of Fish

There are about 30,000 living species of fish. Fish can be classified based on:

A. Breed and
B. Habitat

A. Classification of Fish based on Breed

1. **Bony fish:** bony fish belong to the superclass OSTEICHTHYES. Their skeleton is made of bones. They have gill cover or operculum which is a bony flap of skin over the gills which protect the gills. They also have swim bladders. The swim bladder is a gas – filled sac that helps keep bony fish buoyant. They have dorsal, anal and caudal fins. Bony fish also have a lateral line that runs across the side of their body. The lateral line is a series of sensory organs called **neuromasts** which help bony fish sense vibrations and water pressure and also help them to navigate and locate prey. Bony fish carry out external fertilization. Examples include tilapia, mudfish, carp, mackerel, catfish, salmon etc.
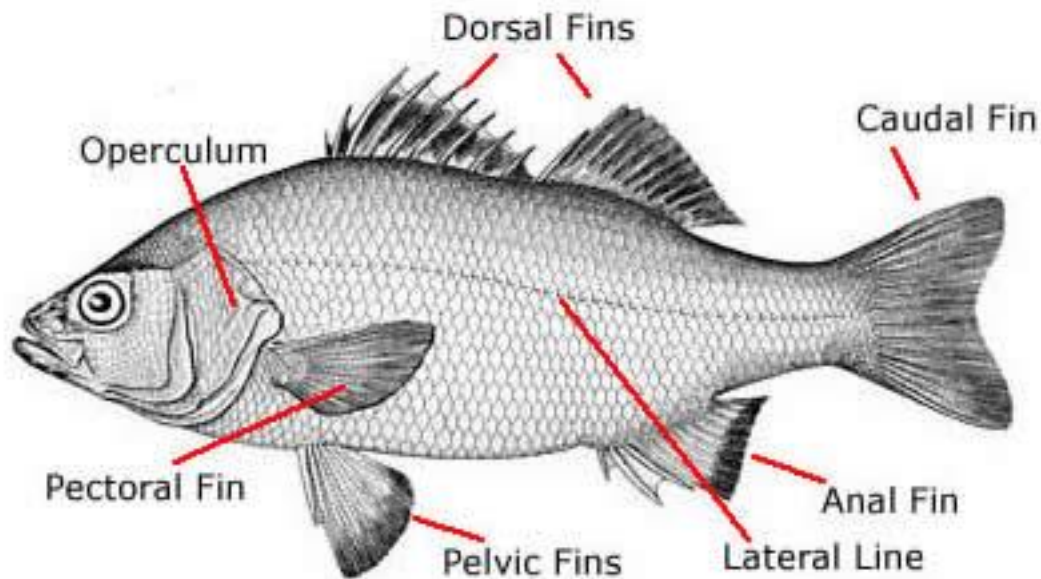

Figure 1: A bony fish

2. **Cartilaginous fish:** they are also known as CHONDRICHTHYES. Their skeleton is made of cartilages and not bones. They have no gill covers. They do not possess swim bladders. They usually have sharp scales. Their fertilization is usually internal. All cartilaginous fish are salt water fish. Examples are shark, dolphin, dogfish, skate, rays etc.
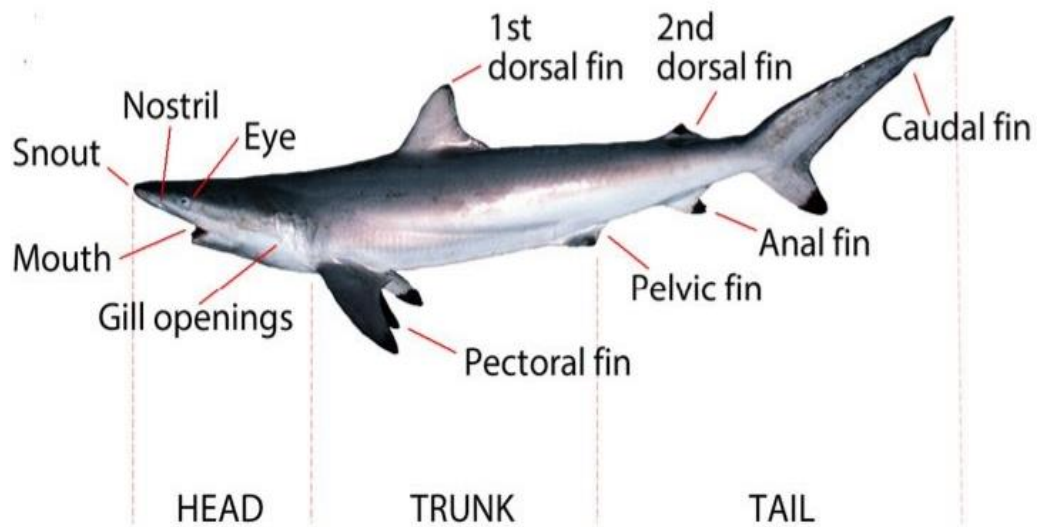
Figure 2: A cartilaginous fish (shark)

Classification of Fish based on Habitat
1. **Fresh water fish:** these are fishes found in water bodies that do not contain salt e.g. rivers, streams, ponds, springs etc. Examples of fishes found in fresh water are trout, pike, carp, perch, tilapia, mudfish etc.
2. **Salt water fish:** these are fishes that live in water that contains salt e.g. ocean and seas. They are also called Marine fish. Examples of such fishes are mackerel, eel, shark, ray etc.

ASSIGNMENT

State five (5) differences between bony fish and cartilaginous fish in a tabular form