Phylum: CNIDARIA

- Cnidarian represents- **the first 'true metazoiins' (Eumctazoa)**
- Phylum coelenterata (earlier name) is derived
  -due to presence of coelenteron
- Later it is renamed as Cnidaria because of the presence of **-Cnidoblasts or cnidocytes (stinging cells)**
- Majority of cnidarians are- **marine** living
- Hydra - **A fresh water form**
- Mostly sedentary but some free swimming forms
- Cnidarians are metazoans with- **tissue grade of organization**
- They show- **diplobiustic body construction**
- Body form is either hydra like- **polyp form(or umbrella like free swimming- medusa**
- Cnidarians are metazoans with- tissue grade of **organization**
- The body is radially symmetrical, seaanemones are biradiai ly symmetrical
- The spaceous central cavity is called - **coelenteron or gastro vascular cavity**
- Coelenteron opens to exterior by mouth which functions both as - **mouth & anus**
- A separate anus is - **absent in cnidarians**
- Digestion is- **extracellular and intracellular**
- Extracellular digestion occurs in the **-coelenteron**
- Intracellular digestion occurs in the **-nutritive muscular cells of endodenn**
- Occurrence of 2 types of digestion is
  - an important feature of this group
- Cnidoblasts in body wall help in- **defence, adhesion & capture of prey**
- Special circulatory & excretory structures are **-absent**
- Sensory structures like **statocysts** occur in the medusoid forms.
- Non-polarised nerve cells form- **diffuse nerve net(non-centralised nerve** net)
- Brain is-absent
- Nerve impulses conduction is **diffuse conduction**
- Sense organs like statocysts occur in -**medusoid forms**
- Asexual reproduction is by - **Fission**, **budding, fragmentation**
- Cnidarians are generally unisexual **(gonochoric)** but some are bisexual **(hermaphroditic)**. Fertilization is **external**. Cleavage is **holoblastic.**
- Development is **-indirect** with **larval** stage
- A free swimmingciliated larval stage is called **-planula**
- Life history includes - **alternation of generations (or) metagenesis**
- Phylurn cnidaria is classified into -3 classes

Class: HYDROZOA

- These are-**Solitary or Colonial**
- Life histroy includes- **sedentary, asexual,** polypoid form & free swimming, sexual medusoid forms alternating with each other (like Obeiia)
- Mesoglea is - **non-celluar**
- Cnidoblasts occur in **-ectoderm only**
- Germs cells (reproductive cells) are derived from- **ectoderm**
- Medusa is - **Crespedote** (with a velum)
- Many colonies are polymorphic with different types of zooids like **gastrozooids** (feeding), **dactylozooids** (defensive, prey capturing), **gonozocids** (reproductive)
- Example; *Hydra, Physalia* (Portuguese man of war; polymorphic) *Halistemma:* polymorphic
  e.g.; *Obeiia* is dimorphic form (polyp and medusa! stages are present)

CLASS: **SCYPIIOZOA**

- These are commonly called-**Jelly fishes**
- They are solitary & medusoid but -polyp stage is reduced
- Medusae are - **Acraspedote** (without velum)
- The reduced polypoid stage in the developrnetn is called- **Scyphistoma**
- Scyphistoma produces **- medusoid forms by strobilation and they are called as ephyra ' larvas**
- Mesoglea is **-Jelly like** with amoebocytes
- Gastrovascular cavity is divided into - stomach, gastric pouches, radial canals& circular canal
- Mouth is surrounded by
  -four oral arms
- Cnidocvtes occur in - **ectoderm *&* endoderm**
  (on endodermal gastric filaments)
- Germ cells are derived from - **endoderm**

E.g: *Aurelia & Rhizostoma*

Class: Anthozoa or Actinozoa

- These are sedentary, polypoid forms commonly called- **sea anemones**
- Mesoglea is-**cellular** & has connective tissue
- Mouth opens into - tubular **stomodaeum** (pharynx)
- Coelenteron is divded into - numerous radiating compartment by vertical, radiating septa called **mesenteries**
- The innerfree margin of mesentry is produced into - **acontium** that bears cnidocytes.
- Mouth has ciliated grooves called
  - siphonoglyphs one or both the sides
- Cnidocytes occur in - **ectoderm & endoderm**
- Germ cells are derived from **-endoderm (as in scyphozoan)**
- Some secrete a calcareous exoskeleton called a coral- **Coral reefs are formed in warmer parts of seas**

E.g:: *Adamsia* - sea anemone
Corallhnn - a coral animal
Gorgonia - colonial form commonly called-sea fan
Pennatula - sea pen.