

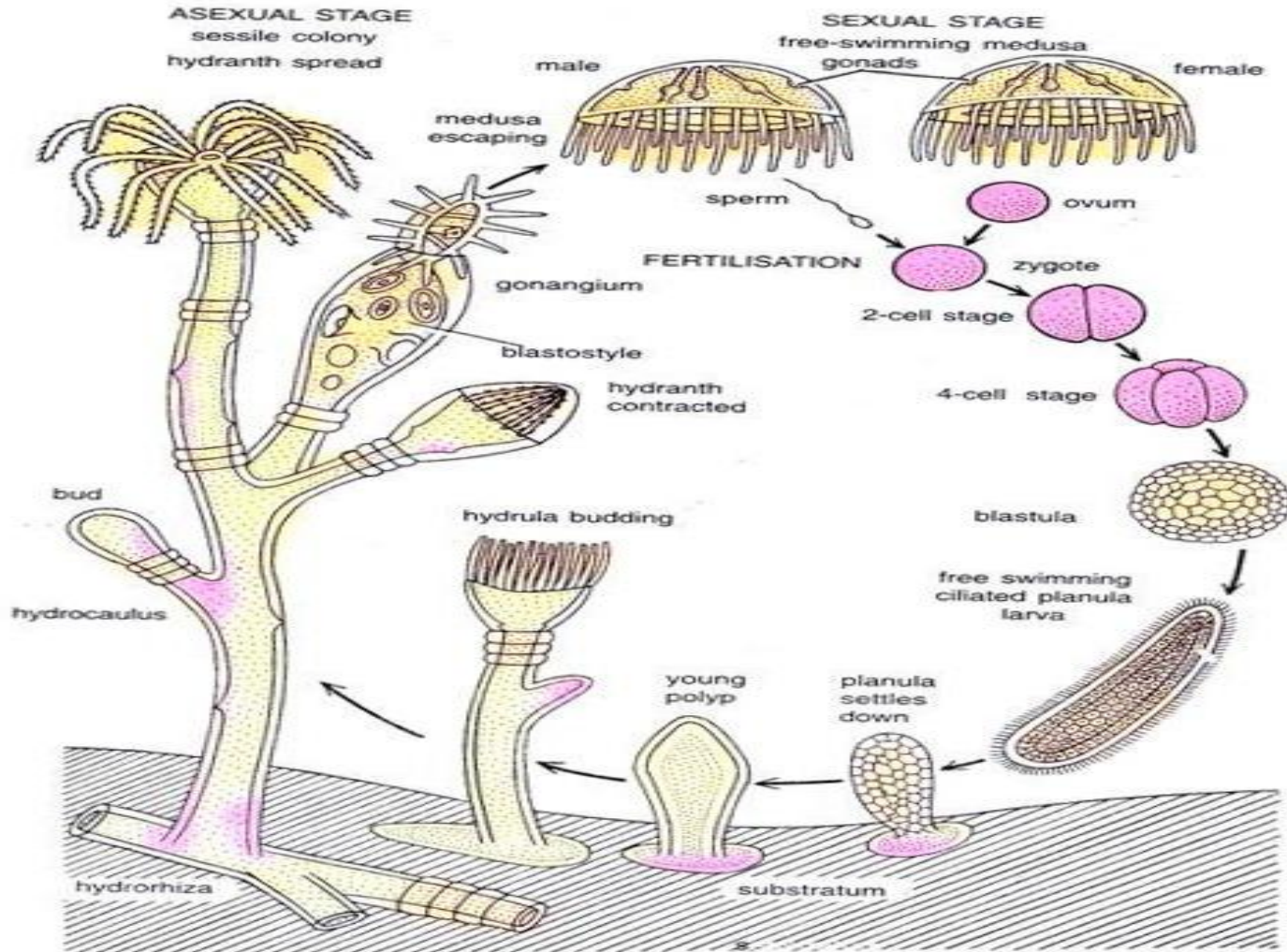
Topic: Morphology and Life history of Obelia
Class: B.Sc Part –I (Hons.)
Paper- I
Group – A

Faculty Name : Dr. Kumari Sushma Saroj

Department: Zoology

College: Dr. L. K. V. D College, Tajpur, Samastipur

Obelia: Stages in the development and life history



- The free swimming planula stage in the life history of Obelia, helps in the dispersal of the species.
- The life history may be represented as male and female gametes → zygote → planula larva → hydrula → colony → sexual medusae → gametes → zygote and so on.

Life History of Obelia:

- **Fertilisation:**
- Fertilisation usually takes place in open sea water where the gametes are set free.
- Sometimes, the sperms are carried into the female medusae with water currents and there they fertilize the eggs in situ.
- However, the parent medusae die soon after liberating their respective gametes.

Development:

- The zygote undergoes complete or holoblastic and equal cleavage to form a single-layered blastula with a blastocoele.
- Some cells migrate into blastocoele, eventually filling it completely to form a solid gastrula known as stereo gastrula.
- Its outer cell layer becomes the ectoderm and inner cell mass the endoderm.

- The gastrula elongates and its outer layer of ectoderm cells becomes ciliated, and now it is called planula.
- Soon, a cavity called enteron develops in the solid endodermal cell mass by the process of delamination and the planula becomes a two-layered larva having an outer ciliated ectodermal cells and an inner layer of endodermal cells.

- The planula after a short free-swimming existence settles on some solid object by its broader end.
- The free end forms a manubrium with a mouth and a circlet of tentacles.
- Thus, a simple polyp or hydrula is formed which grows a hydrorhiza from its base, from which an Obelia colony is formed by budding.