

Topic: canal system in sponges

Class: B.Sc Part –I (Hons.)

Paper- 1

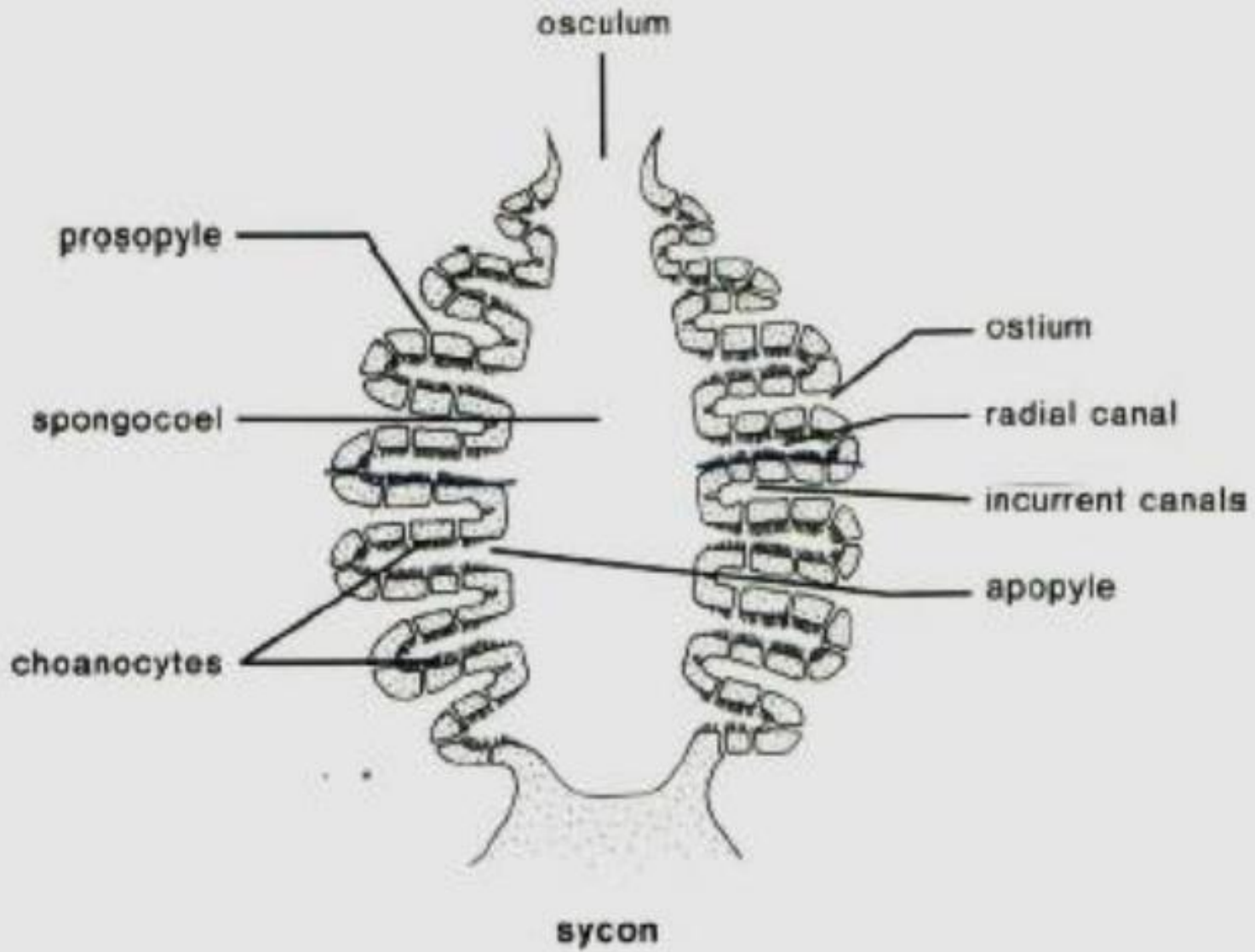
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- **Course of water current in Syconoid type canal system**
- **Ingressing water dermal ostia incurrent canal Prosopyles Radial canals Apopyles Spongocoel Osculum Outside**



- Sycon canal system takes a more complex form in few species like Grantia,
- where the incurrent canals are irregular and branching forming large sub-dermal spaces.
- This is due to the development of cortex, involving pinacoderm and mesenchyme spreading over the entire outer surface of sponge.

- **Course of water current in Leuconoid type canal system**
- **Ingressing water dermal ostia incurrent canal Prosopyles Flagellated chambers Apopyles excurrent canals Osculum Outside**

- Leucon type of canal system has the following three successive grades in its evolutionary pattern:
- **Eurypylous type:** This is the simplest and the most primitive type of leuconoid canal system.
- In this type the flagellated chambers directly communicate with the excurrent canal through broad apertures called the apopyles.
- Ex: *Plakina*

- **Aphodal type:** In this type of canal system the apopyles are drawn out as a narrow canal called aphodas.
- This connects the flagellated chambers with the excurrent canals.
- Ex: *Geodia*
- **Diplodal type:** in some of the sponges, along with aphodas another narrow tube called prosodus is present between incurrent canal and flagellated chamber.
- This arrangement gives rise to diplodal type of canal system.
- Ex: *Spongilla*