

Topic: canal system in sponges

Class: B.Sc Part –I (Hons.)

Paper- 1

Group – A

Faculty Name : Dr. Kumari Sushma Saroj

Department: Zoology

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

Types of canal systems

- Different sponges have different arrangement and grades of complexity of internal channels and accordingly the canal system is been divided into the following three types:

- **Ascon type of canal system**
- This canal system is the simplest of all the three.
- It is found in asconoid type of sponges like *Leucosolenia* and also in some of the developmental stages of all the syconoid sponges.
- The body surface of the asconoid type of sponges is pierced by a large number of minute openings called as incurrent pores or ostia.
- These pores are intracellular spaces within the tube like cells called porocytes.

- These pores extend radially into mesenchyme and open directly into the spongocoel.
- The spongocoel is the single largest spacious cavity in the body of the sponge.
- The spongocoel is lined by the flattened collar cells or choanocytes.
- Spongocoel opens outside through a narrow circular opening called as osculum located at the distal end and it is fringed with large monaxon spicules.

- The surrounding sea water enters the canal system through the ostia.
- The flow of the water is maintained by the beating of the flagella of the collar cells.
- The rate of water flow is slow as the large spongocoel contains much water which cannot be pumped out through a single osculum.