

Porifera. (Salient features)

B.Sc. (Hons)
Part - ~~III~~ Zoology
Paper - 1st.

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→ (Grk. poros = pore : ferre = to bear).

- i) Animals of this phylum are generally known as Sponges.
- ii) These are aquatic and are generally attached to some Substratum.
- iii) It is Asymmetrical & Radially Symmetrical, multicellular organisms with cellular grade of organisation without well defined tissues and organs.
- iv) It includes about 5,000 species.
- v) Generally called 'Sponges', sessile and aquatic; marine except member of one family spongillidae (spongilla).
- vi) Its body shape is like vase or cylinder.
- vii) Its body surface is perforated by numerous pores known as Ostia through which water enters and otherwise one or more large openings called Oscula by which the water passes out.
- viii) Its body wall is Diploblastic, means its body wall is made of outer Ectoderm and inner Endoderm layer along with an intermediate layer is known as Mesenchyme, with loose cells.
- ix) The interior space of the body is either hollow or permeated by numerous canals lined with choanocytes known as spongocoel.
- x) Characteristic skeleton consist of either fine flexible spongin fibres, siliceous spicules or calcareous spicules.
- xi) Mouth absent, Digestion intracellular, Excretory and Respiratory organs absent.
- xii) Body wall is traversed by many canals, i.e., Ascon type, sycon type and Leuconoid type due to simplicity in some forms & complexity in others.
- xiii) The canal system helps in feeding, respiration, excretion, and reproduction.

- xiv) The Nervous and sensory cells are probably not differentiated.
- xv) Sponges are Monoecious.
- xvi) Reproduction takes place by both asexual & sexual methods.
- xvii) Asexual reproduction by Budding or by Gemmules and sexual reproduction by Gametes (ova & sperms).
- xviii) Cleavage ~~holo~~^{holo}blastic, development indirect through a free swimming ciliated larva called Amphiblastula or parenchymula.
- xix) Regeneration also takes place.