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Sub. Biology

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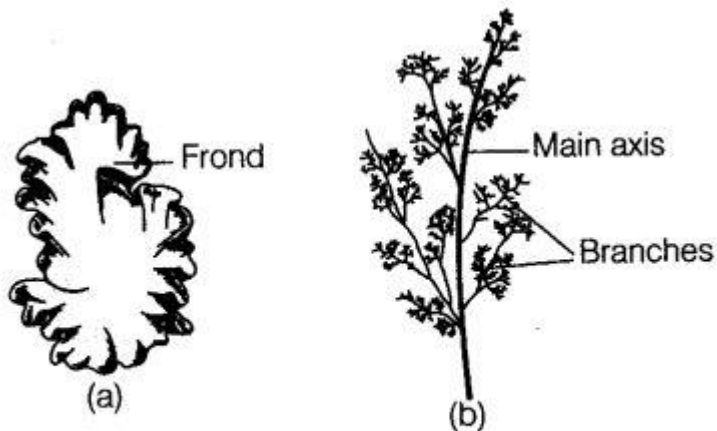
### iii. Class-Rhodophyceae (Red Algae)

The members of Rhodophyceae are commonly called red algae because of the predominance of the red pigment, i.e., r-phycoerythrin in their body.

(a) Habitat Most of the red algae are marine with greater concentrations found in the warmer areas. They are found in both well lighted regions close to the surface of water and also at great depths in oceans where relatively little light penetrates.

(b) Thallus The red thalli of most of the algae are multicellular. Some of them have complex body organisation like *Asterocystis* is pseudofilamentous, *Porphyridium* is unicellular, *Porphyra* has parenchymatous sheets, *Cbondrus* is ribbon like, *Gelidium* is a multicellular sea weed.

(c) Cell Wall The cell wall contains cellulose, pectic compounds and certain mucopolysaccharides called phycocolloids, such as agar, carrageenin, etc. In many algae, cell wall contains pits.



**Fig 3.4** Red algae (a) *Porphyra* (b) *Polysiphonia*

(d) Photosynthetic Pigments These include chloro-phyll-4, carotenes, xanthophylls and phycobilins. Phycobilins are water soluble and are of two types, i.e., red-coloured phycoerythrin and blue-coloured phycocyanin.

(e) Reserve Food It is floridean starch similar in constitution to glycogen and amylopectin. if) Reproduction Vegetative reproduction occurs by fragmentation, regeneration of hold fast and gemmae. Asexual reproduction occurs by non-motile spores (carpospores, monospores, tetraspores and neutral spores).

Sexual reproduction occurs by non-motile gametes and is oogamous type. The male sex organs is called spermatogonium or antheridium. The male produced is non-flagellated, called as spermatium. The female sex organ is called carpogonium. After fertilisation, a new structure called carposporophyte is produced. It remains attached to the parent alga.

(g) Life Cycle Life cycle has two or more phases such as haplohaplontic, haplohaplohaplontic,

diplo-diplohaplontic, etc.