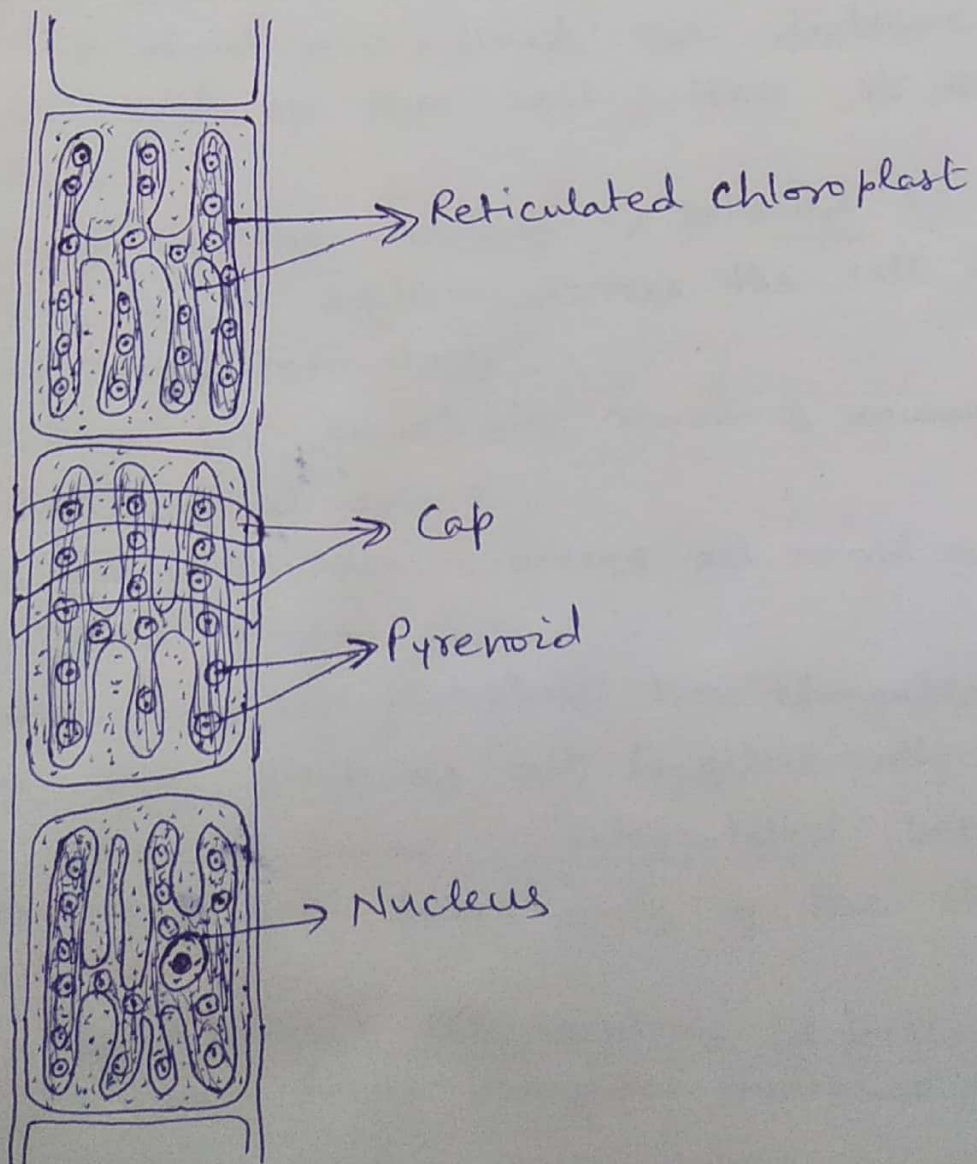


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class : Deg. I (Hons.)
Paper : I (Algae)
Topic : *Dedogonium* (Contd.)
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• Structure of *Dedogonium*:



(Fig: A Filament of *Dedogonium*)

(7)

Oedogonium has certain special features, such as: peculiar mode of cell-division, formation of apical caps and development of dwarf males.

Cell-division in Oedogonium:

cell-division starts with the formation of an internal transverse ring of wall material at the upper end just below the septum.

The ring gradually increases in thickness.

The nucleus (by this time has) migrated upwards. It lies at about one-third the distance from the upper end of the cell. Here it divides mitotically.

The division of the nucleus is followed by the formation of a septum across the cell between the two daughter nuclei.

The septum for sometimes remains unconnected with the lateral walls.

The old cell-wall then ruptures all round outside the thickened ring.

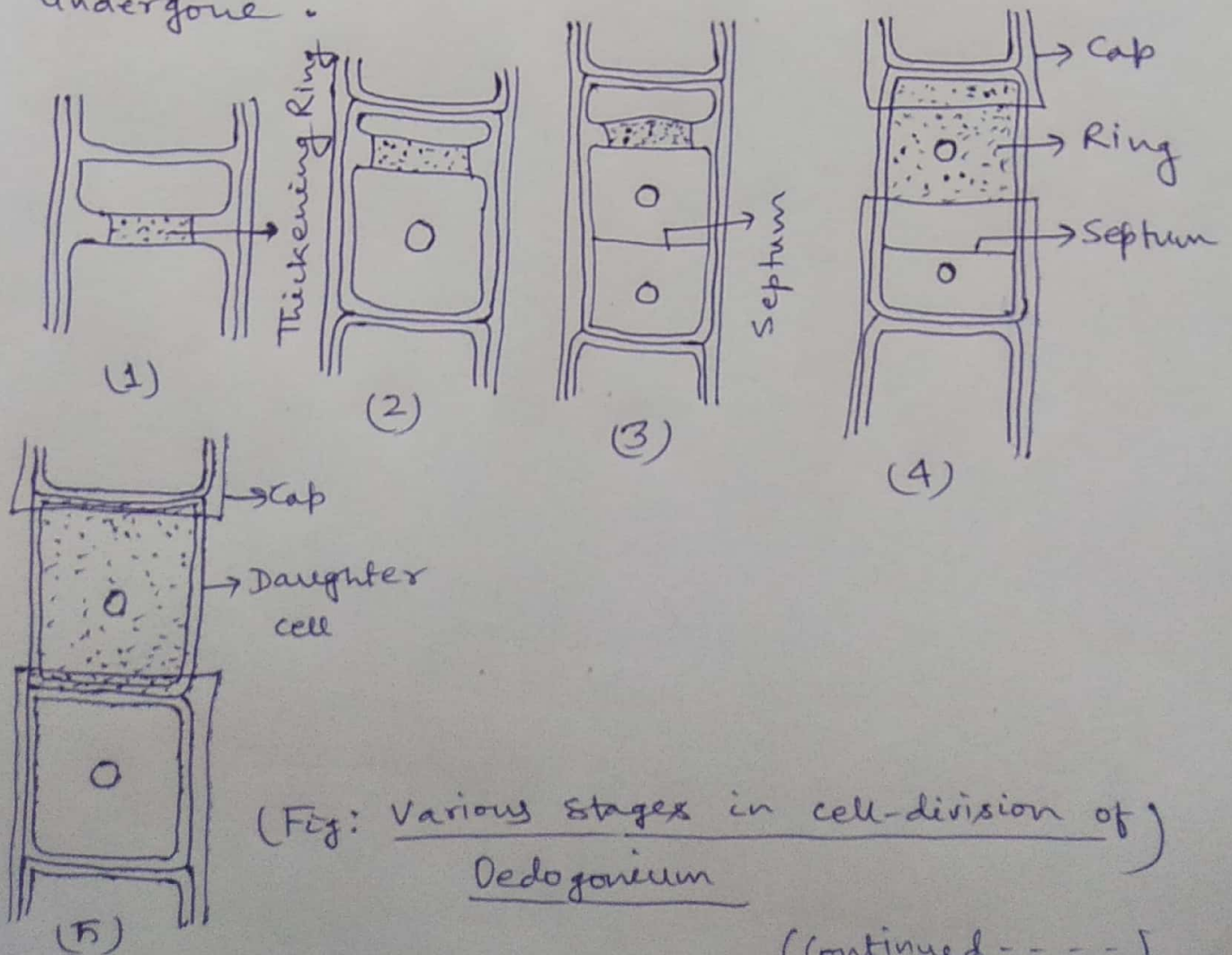
The upper daughter protoplast now elongates and the ring stretches out longitudinally to form a new membrane, intercalated between the upper and the lower ends of the old ruptured wall.

At the same time, the septum is pushed upwards as the lower daughter protoplast elongates.

Finally it lies opposite the lower end of the intercalated membrane. The upper daughter cell thus formed has now a bounding wall consisting mainly of the intercalated membrane. There is, however, a portion of the ruptured parent cell-wall fitting like a cap at its upper end. It produces a characteristic ring-like mark, the apical-ring.

Only the cell possessing the apical ring divides again. It is called the cap-cell.

The number of rings the cap-cell contains, denoted the number of divisions the cell has undergone.



(Fig: Various stages in cell-division of
Dedogonium)

(Continued - - -)