

Dr. Rachana Shalini

Department of Botany

Class : Deg II (Hons.)

Paper : IVth (Anatomy)

Topic : Mechanical Tissues (Contd.)

Lecture No. - ~~118~~ 119

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• Kinds of Mechanical Tissues:

① Collenchyma:

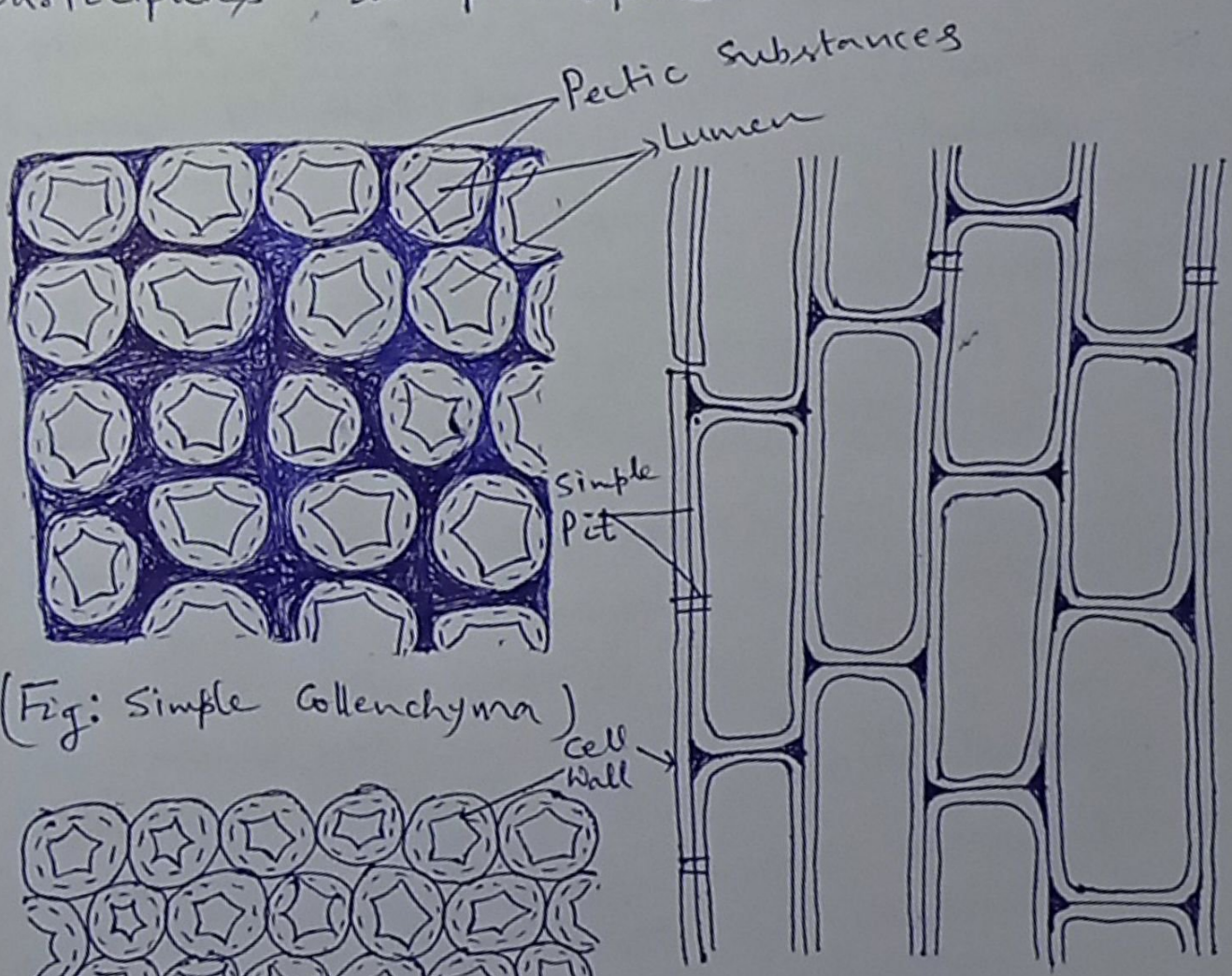
Collenchyma is a kind of mechanical tissue. In T.S., its outline appears to be elliptical, circular or angular while in L.S., it appears somewhat elongated. The wall is unevenly thickened. The intercellular spaces at the corners have heavy deposition of pectin and cellulose. The cell-wall bears simple pits lying here and there. It occurs usually in the hypodermal region of the dicot stem. Cells may or may not contain chloroplasts. The intercellular spaces, sometimes do not have the deposition of pectic substances, such tissue represents the lacunate collenchyma.

Function:

It provides tensile strength to the stem by virtue of its flexible nature.

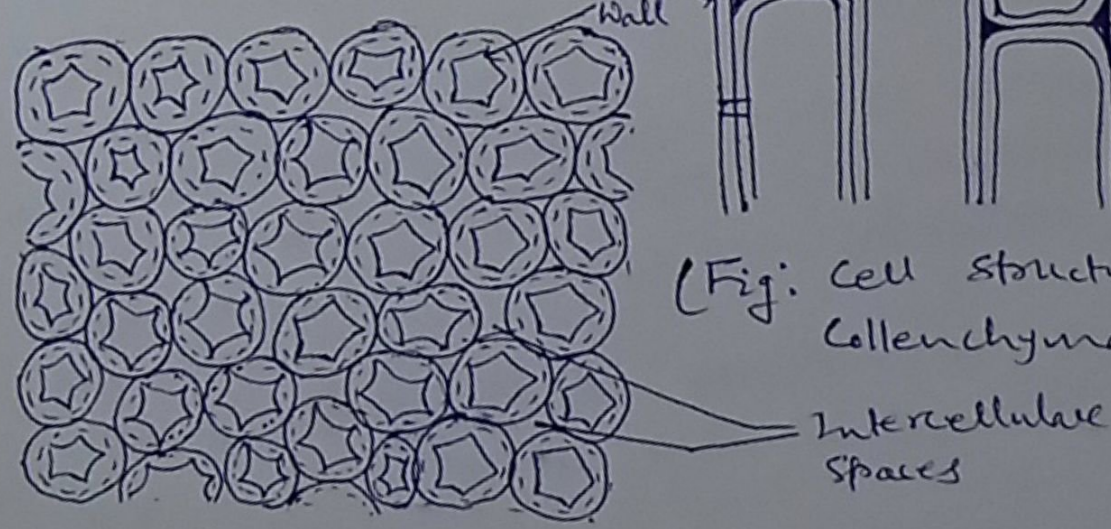
It also constitutes the flange of the I-shaped girder. That part of plant, where it is available in adequate amount, is normally found to be soft and delicate.

The chlorophyllous collenchymatous tissue is reported to be physiologically vital, as it participates in photosynthetic activity.



(Fig: Simple Collenchyma)

(Fig: Cell structure of Collenchyma in L.S)



(Fig: Lacunate Collenchyma)