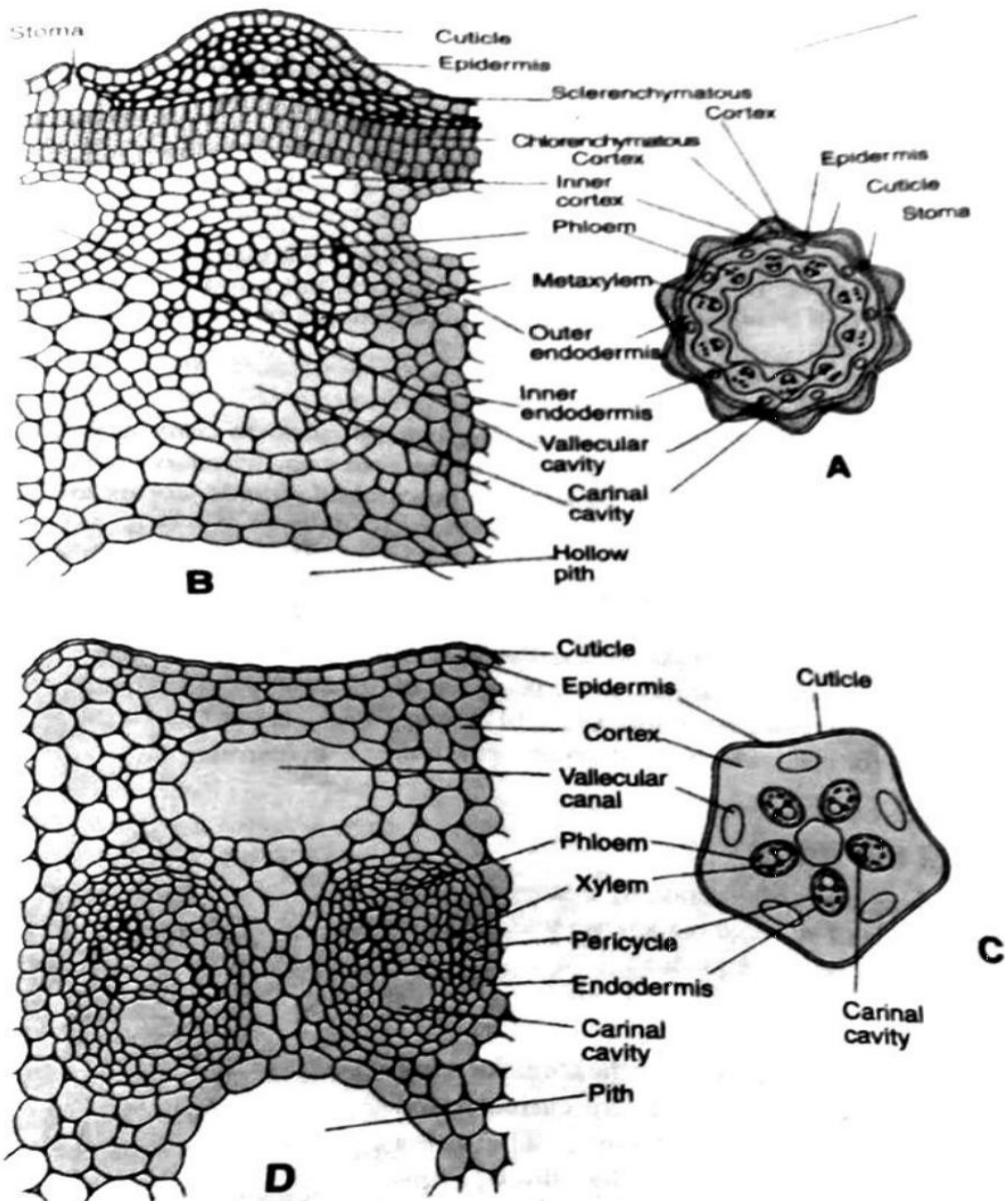


## Nodal Anatomy of *Equisetum*

Nodal Anatomy of *Equisetum* sp. Shows the following features –

### NODAL ANATOMY OF *EQUISETUM*



1. The anatomy of the node shows some difference from that of the internode. Vallecular canals are present in some species (*E. debile*), and may be absent in others.
2. The pith is present at the nodes and forms a diaphragm separating the internodes above and below. The vascular bundles, that are separated in the internodes, are connected by a continuous cylinder of xylem in nodal region.
3. So the vasculature in the node is in the form of a continuous cylinder. Eames (1909) reported that carinal canals are absent in the nodal region.
4. The continuous vascular cylinder of the nodes gives rise to the leaf traces and the branch traces. Some workers regard the separate vascular strands of the internodes as leaf traces that extend down the internodes of the node below.
5. Another view regarded the stelar system to be a dictyostele and the parenchymatous gaps between the bundles as leaf gaps. This is also untrue as the leaf traces in microphyllous pteridophytes do not leave any leaf gaps.
6. Moreover this view is not supported by the studies on the extinct relatives of *Equisetum*. This view also overlooks the presence of intercalary meristem whose activity is responsible for growth in length of the internode.
7. The nodal vascular cylinder must be looked upon as a siphonostele. The appearance of the parenchymatous gaps in the internode may be due to some activity of the intercalary meristem.