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Dept;mbbs

Matrix num;19/MHS01/100

1. They influence the well-being of human populations on a large scale because they are part of the nutrient cycle in ecosystems. They also have other ecosystem uses, such as pesticides. Yeasts have been used for thousands of years in the production of beer, wine, and bread. Fungi not only directly produce substances that humans use as medicine, but they are also versatile tools in the vast field of medical research.
- 2.

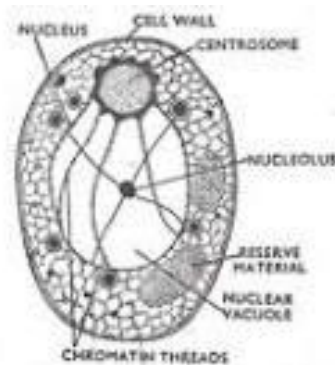


Fig. 214. Diagrammatic representation of parts of a yeast cell.

3.(a)Plasmogamy

(b)Karyogamy

(c)meiosis

4. a waxy cuticle and gametangia. The waxy cuticle helped to protect the plants tissue from drying out and the gametangia provided further protection against drying out specifically for the plants gametes.

5. a stele typical of dicotyledonous plants that consists of vascular bundles of xylem and phloem strands with parenchymal cells between the bundles. The stele of the primary root contains a vascular system with differentiated xylem vessels that function in the transport of water and nutrient and water to the primary elements. The vasculature of the stele surrounds the inner parenchymal pith tissue. It is characteristic of Gymnosperms and dicots. In this type of stele collateral or bicollateral vascular bundles are present in a ring (Brebner, 1902, Fig. 7 A).

(b) A type of monocotyledonous siphonostele in which the vascular bundles are dispersed irregularly throughout the center of the stem. It is characteristic of monocots. In this type of stele vascular bundle lies scattered in the ground tissue (Brebner, 1902). It is the highly evolved stelar organisation. (Fig. 7 B).

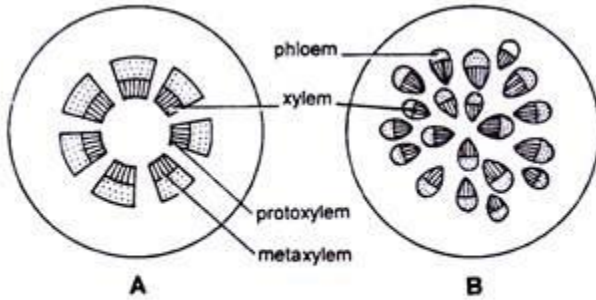


Fig. 7. (A-B). Stellar System : A. Eustele, B. Atactostele

Thus, it is evident, that protostelic condition has given rise to siphonostelic, dictyostelic and ultimately to polycyclic condition during the course of evolution. Thus, it is evident, that protostelic condition has given rise to siphonostelic, dictyostelic and ultimately to polycyclic condition during the course of evolution.

(c) A stele with central pith surrounded by vascular tissue is called siphonostele or a medullated protostele is called siphonostele. Siphonostele is of two types: (a) Ectophloic siphonostele, (b) Amphiphloic siphonostele.

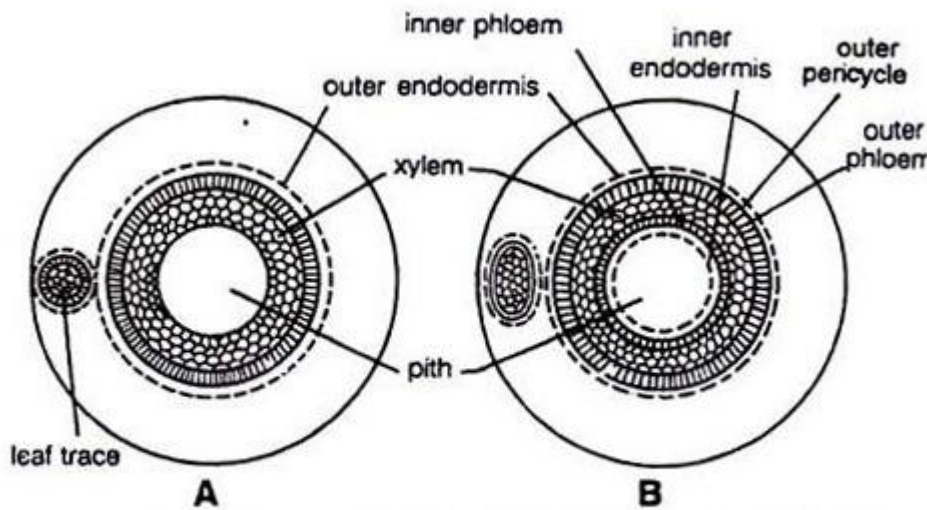


Fig. 3 (A-B). Stellar System : A. Ectophloic siphonostele, B. Amphiphloic siphonostele

(d) A siphonostele with more overlapping leaf gaps so as to show more than interruption in one transverse section is known as dissected siphonostele or dictyostele. The vascular parts of dictyostele between the neighbouring leaf gaps are known as meristeles.

The meristemes are typically protosteles e.g., *Pteris*, *Ophioglossum lusitanicum*, *Adiantum capillaris-veneris*, *Dryopteris chrysocoma* etc. (Fig. 5 A,B).

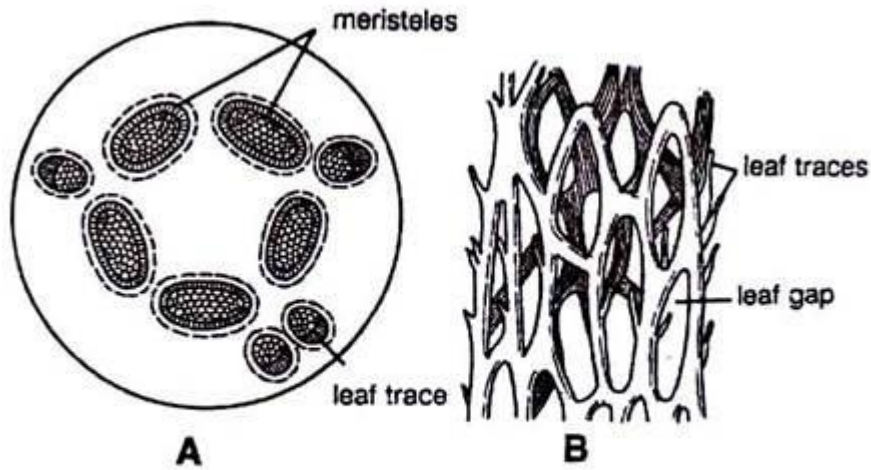


Fig. 5 (A–B) Stelar System : A. Dictyostele, B. Vascular skeleton of a dictyostele

6.

