

Examrace

Competitive Exams: Revision Terminology Part 27

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- Man's intestine – E. Coli – synthesis of Vit B₁₂.
- Genetic engineering – Escherichia & agrobacterium
- Selaginella bryopteris = Sanjeevani
- Pteridophytes – vascular cryptogams, absence of overle, highly organized sporophyte generation, sporophyte is independent of gametophyte.
- Pteridophytes simple, uninerved leaves = microphyllous, Cambium is absent.
- Xylem made of tracheids only & phloem consists of sieve tube only.
- Azolla = Biofertilizer – water fern
- Phymia – fossil plants
- Psilophytales – 1st land vascular plants
- Salvinia – Aquatic pteridophyte weed.
- Cyathea & Alsophila – tree fern
- Protostele – lycopodium, Selagiwella.
- Alsophila – pteris, Dryptoresis
- Siphonostele – equisetum.
- Heterosporous – selaginella – endosperic diecious.
- Homosporous – equisetum, lycopodieam, Fteris – exosporic, monoccious
- Eusporangiate – from superficial cell – lycopodium, selaginella, equisetum
- Lepto Eusporangiate – from single initial cell – pteric, Marselia.
- Sex organ embedded in prothallus – antheridium, uninucleate, biflagellate archegonium – neck & venter
- Fertilization – H₂O essential, chemotactic
- Gametophyte from sporophyte without meiosis & spore formation – apospery.
- Sporophyte from gametophyte without gametes & sexual fusion – Apogamy.

Club moss	Horse tail	Ferns
(Glycoside)	(sphenopsida)	(pteropsida)
Microphyllous	Homosporous	Macrophyllous (frond)
Hemo + Hetero	Homosporous	Homosporous
Sporangia in strobili (cone)	Sporangiophore	Clusters (sori)
True mosses	Hollow, jointed stem	Rhizome with green leaves In air
<i>Understanding the Various Ferns, Mosses and Species</i>		

- Selaginella – resurrection plant, sporophyte, dichotomously branched, positive geotropism, rhizophores develop exogenously, polystele of protostele type, trabeculae.
- Show Casparian strips (endodermal), monoarch with exarch xylem, phloem is horse shoe shaped, 2 layered jacket of microsporangia.
- Megasporangium – 4 layered structure with 2 layered jacket.
- 13 celled – one prothallial cell + 12 antheridium (8 jacket cell + 4 archegonial cell)
- Oval biflagellate antherozoid, multicellular female gametophyte, vivipary is seen
- Number of cotyledons = 2, meiosis in young sporangia, air space instead due to differential growth rate of outer cortical & inner vascular tissues.
- If development of rhizopores permanently suppressed – root not produced & water absorption adversely affected.
- Ferns – damp shady places, Tropical rain, pinnately compound leaf, rachis present, fronds present
- e – shaped stele
- Dry brown scales remote, leaves uncoiled like water spring – Circinate furcate (branch dichotomously) . Ferns survive forest fires.
- Adiantum – vegetable reproduce each sorus covered by indusium (Haploid spores)
- Siphonostele – Stele with pith.
- Protostele – Xylem, phloem, pericycle, endodermis & no pith.
- Fern – sporangium consists of multicellular stalk & biconvex capsule.
- One layered wall & capsule is thin called annulus (thickening of inner & radial walls)
- Thin walled region called stomium (mouth) (spore mature, cell of annulus dry & bends back with jerk) .

- Prothallus – haploid, unicellular rhizoids
- Prothallus – antheridium - spirally coiled, multiflagellate.
- Prothallus – archegonium – flask shaped – venter & Aneck canal cells. Venter in prothallus & contain single large egg. Cell with female gamete in it.
- Sperms force fern to grown on wet places.
- Sperms grown into photosynthesis prothallus which even susceptible to dessication than bryophyte gametophyte.
- Bryophytes – vascular tissue absent, gametophyte is dominate mosses gametes within multicellular sex organs called as sterile jackets ciliated antherozoids for used during fertilization (needed water) .
- Amphitaxis of plants kingdom srkashyap – father of Bryology in India western Himalayas – gold mines of liverworts
- Western Himalayas – gold mines of liverworts

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