Unifying features of archegoniates pdf

Same questions asked by users Core Paper IV ARCHEGONIATAE Unit-I Introduction: Integrated Features of Arcegniates; The transformation of generations. Common features transition in the habit of land: adaptation of land plants to origin and land habit Bryophytes: origin and classification; Range of thalamus organization. Classification (up to family). Recia, Marchtia, Anthoceros and Funaria (developmental stages do not include structure, reproduction and evolutionary trends). Ecological and economic importance of Bryophytes Unit-II petridophytes: general features, classification. classification (up to family), morphology, anatomy and cylotum, Reproduction of celginella, equisatum, ptys and marcilia apogami, and aposperori, asymmetry and seed habit, telom theory, stellar development and economic importance unit-IV paleonobist: geological time scale, fossils and fossilization process morphology, anatomy and rinia, disasters, Lepidodendron, Lyginteriopop, Cycadeeaoid and Williamsonia module-I intro disassociated; infection in the habit of land; The transformation of generations. Bryophytes: common features; adaptation to the habit of land; classification; Range of thalamus organization. Type Studies- Bryophytes: Classification (up to family), Morphology, Anatomy and Reproduction of Risia, Marchtia, Pelia, Porella. Exercise 1: Study of morphology of Thalus of Riksia Practice 2: Morcy of Marchtia-Thalass, Complete Mount of Rhizoid and Scales, Vertical segment of Thalass through Jemma Cup, entire mount of Jemma (all temporary slides), vertical segment of antheridiofore, arcegoniophohore, spiro spos (all permanent slides). Exercise 3: Pelia and Porella Module-II Type Studies- Bryophytes: Classification (up to family), Morphology, Anatomy and Reproduction, Study of Morphology of Anthoceros, Sphagnum and Thalus of Funaria. Exercise 4: Anthoceros-morphology of the thalamus, dissection of sorophyte (stomata, spore, pseudonym, ulumela) (to show temporary slides), vertical segment of the thalamus. Exercise 5: Spriganum- Morphology of the plant, the entire mountain of the leaf. Exercise 6: Funeria-morphology, leaf-complete mountain, rhizoid, operculum, peristome, anunus, spore (floating slide); Permanent slides show the longitude segment of antherial and arcagonial heads, capsules and protonema. Module-III reproduction and evolutionary trends in Risia, Marchantia, Anthoceros and Funaria (not included in developmental stages). Ecological and economic importance of bryophytes with a special reference to Sfagnam. Module-IV Pteridophytes: Common Features; classification; Early land plants (Cooksonia and Rinia). Types of Studies- Pettidophytes: Classification (up to family), Morphology, Anatomy and Reproduction of Cylotum, Celginella, (developmental details will not be included). Exercise 7: Cylotum- Study of the sample, transverse section of the gymnasium. Practice 8: Morphology, complete mount of leaf with ligule, transverse section of stem, complete mount of strobilus, complete mount of microspophile and megaspophyll (floating slide), longitude segment of strobilus. Module-V type studies- Pettidophytes: Classification (up to family), morphology, anatomy and reproductive equistom and pteris (developmental details are not to be included). Exercise 9: Equilibrium-Morphology, Transverse section of the internode, longitude section of strobilus, transverse of strobilus, complete mount of spongiophoro, entire mountain of spores (wet and dry) (floating slide), transverse section of rhizome. Exercise 10: Pteris-Morphology, Transverse section of rachis, vertical section of sporozyl, whole parts of spores, whole mount of spores (temporary slide), transverse section of rhizome, whole mount of prothalus with sex organs and young spophytes. Module-VI epomi, and apospry, heterosperary and seed habit, telom theory, stellar development; Ecological and economic importance. Module-VII Gymnoseprm: General features, classification (up to family), morphology, anatomy and reproduction of psychus, pinus and genitom (developmental details will not be included); Ecological and economic importance. Exercise 11: Cycas-morphology (corlooid roots, buloid, leaf), complete mount of microsphere, transverse section of the corlooid root, transverse section of the racchis, vertical section of the form, vertical section of the microsphere, full mount of spores (temporary slide), longitude section of the ovule, transverse section of the root (permanent slide). Exercise 12: Pinus-morphology (long and dwarf shooting, complete mount of dwarf shoot, male and female cone), transverse section of needle, transverse section of stem, transverse section of male cone, complete mount of microspophile, full mount of microspops (temporary slide), longitude segment of female cone, tangential longitude segment and radial longitude segment stem (permanent slide). Textbook: 1. Vasistha, P. C, Sinha, AK, Kumar, A.(2010). Petridofita. S. Chand. Delhi, India. 2. Bhatnagar, SP&amptra, A. (1996). Gymnosperm. New Age International (P) Limited Publishers, New Delhi, India. Reference Book: 1. Avoidance, NS (1991). An Introduction to Embryophyta: Vol. I. Bryophyta. Central Book Depot. Allahabad 2. Raven, Ph., Johnson, G. B, Losos, J. B, Singer, Sr. (2005). Biology. Tata McGraw Hill, Delhi. 3. Introduction to Vanderpurort, A&Goffinate, B.(2009) Bryophytes. Cambridge University Press. 1 Arcegniates archagneate originated probably from a combination of a ancestral green algae, which are gymnosperum with briophytes, petridophytes and argnospermedaria. A hollow container egg cell housing. Egg cell is a precursor to the spophytic generation. Arceganium is differentiated into venter and the emergence of neck sexual reproductive asymmetry in arcegniates this phenomenon leads to the formation of spores of two sizes, And megaspors zygote, a product of fertilization of the egg cell in arcegnoium is the parent of the spoofic generation def. - Arkegnian is a group of primitive plants, bears the female reproductive organ in an arcalimonium (a polycellular, often flask-shaped, egg-producing organ) moss, liverwarts, fern, and most gymnosperms 2: integrated characters of archeology: antiquities are very axic produced from the monotic group of ancient stocks of green algae. The present female of the sexual organs called arceganonium and the male is called antheridium. Presence of chloroplasts containing chlorophyll A, B and carotene. Presence of multicellular gametophytic and spophytic generation. Heterogeneous change of generation. The morphological lack of sexual or gemophytic phase was evident in the life cycle of the archaic. Provides protection to their embryos. Male games are flag-hoisted and modical in bryophytes, peridophytes, (cycadels, gincoles) while the female gamet (egg) is non-pearl. 3: Integrating the characters of arcegidats: bryophytes and petridophytes depend on the presence of liquid water for fertilization. Pollen grains in gymnosperms germinate to form a pollen tube (psychogomi) that does not depend on the water of external fluid to reach the arcagonial neck. The shifting of plants to the habit of land led to expertise in tandem with various spore dispersion mechanisms leading to their successful spread on the land with genetic variation. Plants conducive to life on the ground by internalizing the external environment and exploring the soil in a deep manner. Spores also became resistant to desalination through further expertise in seed plants. Differentiated riseoids and roots to provide strong anchor and efficient supply of water and mineral nutrients. 4: Integrating the characters of arceginisis: increased green surface area to provide more chlorophyll for efficient photosynthesis. The plant developed an efficient vascular system to provide water to every part of the body. Developed a mechanism of evaporation to regulate internal temperature. To restrict water loss, the waxy cuticle developed and formed stomatas to regulate gaseous exchange. Differentiated tissue with thick cell walls (collanchima) and ligified walls (sclerenchima) to support steep habit. Efficient spore dispersion system. Arquegniites developed several adaptive strategies for surviving on land 5 generation changes: bryophytes:- The transformation of generations is very different in arcegnitte. It appears in the haplopiplonotic type of the life cycle, the change of generation in breyophytes, petridophytes and gymnospers is moderately different, the life cycle of bryophytes reflects the regular transformation of gametophytes and spoofic generations. The haploid phase (n) is gametophyte or sexual generation it bears the sexual reproductive organs, which makes the gamet, i.e. And the egg gamenic union is formed of a zygote that develops into a spoofite (2n) deplode phase. 6-generation changes: Sporopite spores form spores, which always germinate to form gametophytes during the formation of spores, spores divide the mother cells meogang and form haploid spores. The production of spores is the beginning of the gametophytic or haploid phase. Spores germinate and form gametophytic or haploid phases Spores germinate and produce gametophytes, which eventually tolerate sex organs, have gamenic union and result in zygote. This is diploy (2n). This is the beginning of the spophytic or diploid phase. 7-generation change: Here two generations are morphologically different, the type of change of generations called heteromophic is the typical and long-lived phase of the life cycle compared to the spoofite generation in gametophytic generation breophytes, Gameophyte is quite independent while spoofite is somehow dependent on gametophyte for its nutrition gametophyte produces spoofite and spoofite and thus causes a regular transformation of 89 changes of generation: Pteridophytes: - In Pteridophytes, the haploid phase (N) is a gameophytic generation or sexual phase it is the reproductive organs -Onthredia and Arcegniia bear. Anthrodia and arceganonia produce flaglet antheroid and egg respectively, gameophytes can be uniform as in odd SP. Gameophyte is free in pteris and dependent in celginella. Diploid phase (2n) or spoofic phase forms 10 generation changes from geoggot after fertilization: Pteridophytes:- Meiosis in SMC (spore mother cell) forms non-movable haplooid spores, which germinate again to form gameophyte. This cycle continues with a change between gametophy and spoofite. All spores formed can be of a type i.e. homosporus species (Lycopodium, Dryopteriops). Formed spores can be of two types i.e. heterogeneous species (celginella, marseillea). Microsposses/male spores developed in male spergia germinate to form male gameophyte. Megaspor/female spores germinate to form female gameophytes developed in megasporangia. 11 Generation Change: Pteridophytes:- Sorophyte is the major stage in the life cycle. It is independent of gametophyte (prothalass) and grows in much greater size. Sorophytes are differentiated into stems, leaves and roots and show well-developed operational tissues. 12 13 Gymnosperum:- The major stage in the life cycle is the sorophyte phase. Gametophytes are very small and can not be independent of the original plant. The reproductive structures of the sorophyte (cone) produce two different types of haplooid spores: microspore (male) and megaspore (female). This phenomenon of sexually differentiated spores is called asymmetry. These spores likewise give birth sexually Gametophytes, which in turn produce gamet. Fertilization occurs when a male and female gamets are involved to form a zigot. The resulting embryos, enclosed in a seed coating, become sorophytes. 14 15 Thanks