

Plant Life Cycles: Gametophyte and Sporophyte Generations

Biology · Answer Key · 23 Questions

1. Which generation occupies the largest portion of a plant's life cycle?

- A) The dominant generation**
- B) The recessive generation
- C) The gametophyte generation
- D) The sporophyte generation

2. In BRYOPHYTES, which generation is dominant?

- A) Sporophyte
- B) Gametophyte**
- C) Zygote
- D) Spore

3. In vascular plants (PTERIDOPHYTES, GYMNOSPERMS, and ANGIOSPERMS), which generation is dominant?

- A) Gametophyte
- B) Zygote
- C) Sporophyte**
- D) Rhizoid

4. What is an advantage of a dominant sporophyte generation?

- A) Increased reliance on water for fertilization
- B) Fertilization and dispersal timed with environmental conditions**
- C) Shorter life cycle
- D) Reduced need for sunlight

5. Pollen grains in seed-bearing plants contain what?

- A) Mature gametophytes
- B) Spores that become the male gametophyte**
- C) Zygotes
- D) Rhizoids

6. BRYOPHYTES are described as the most primitive land plants. What type of environments do they typically grow in?

- A) Dry and sunny
- B) Moist and shady**
- C) Arid deserts
- D) High altitudes

7. What are BRYOPHYTES dependent on to complete their life cycle?

- A) Sunlight
- B) Wind
- C) Water**
- D) Nutrients in the soil

8. What is a characteristic of most mosses regarding water availability?

- A) They require constant moisture
- B) They can withstand long periods of drying out**
- C) They die if they dry out even for a short time
- D) They store water in their roots

9. In the context of plant life cycles, 'dominant generation' refers to:

- A) The generation that produces seeds
- B) The generation that is most resistant to drought
- C) The generation that occupies the largest portion of the life cycle**
- D) The generation that is dependent on water

10. Which of the following is NOT a type of vascular plant mentioned in the text?

- A) PTERIDOPHYTES
- B) GYMNOSPERMS
- C) ANGIOSPERMS
- D) BRYOPHYTES**

11. What is the term for a plant structure that produces spores?

- A) Gametophyte
- B) Sporophyte
- C) Capsule (sporangium)**
- D) Rhizoid

12. What structure in BRYOPHYTES is described as leaf-like?

- A) Seta
- B) Rhizoids
- C) Gametophyte**
- D) Sporophyte

13. What are rhizoids in BRYOPHYTES analogous to in other plants?

- A) Leaves
- B) Stems
- C) Roots**
- D) Flowers

14. What process creates spores?

- A) Mitosis
- B) Fertilization
- C) Meiosis**
- D) Germination

15. What process creates gametes?

- A) Meiosis**
- B) Mitosis
- C) Fertilization
- D) Sporophyte development

16. The fusion of gametes results in a:

- A) Spore
- B) Zygote**
- C) Gametophyte
- D) Sporophyte

17. What is a thallus in the context of BRYOPHYTES?

- A) A type of spore
- B) The sporophyte generation
- C) The gametophyte generation**
- D) A structure for dispersal

18. What is the term for the process by which a plant grows from a spore or seed?

- A) Fertilization
- B) Meiosis
- C) Mitosis
- D) Germination**

19. Which of the following are examples of BRYOPHYTES?

- A) Ferns, mosses, and conifers
- B) Mosses, liverworts, and hornworts**
- C) Flowering plants and trees
- D) Algae and fungi

20. What is the male gametophyte in seed-bearing plants?

- A) Pollen grain**
- B) Spore
- C) Zygote
- D) Seed

21. BRYOPHYTES lack true:

- A) Leaves
- B) Stems
- C) Roots**
- D) Spores

22. The 'seta' is a structure associated with which generation in BRYOPHYTES?

- A) Gametophyte
- B) Sporophyte**
- C) Zygote
- D) Spore

23. Vascular plants are characterized by having a dominant:

- A) Gametophyte generation
- B) Sporophyte generation**
- C) Rhizoid system
- D) Thallus structure