Plant Life Cycles and Dominant Generations

Biology · Answer Key · 20 Questions

1. What does the 'dominant generation' in a plant's life cycle refer to?

A) The generation that occurs first.
B) The generation that is haploid.
C) The generation that occupies the largest portion of the life cycle.
D) The generation that produces spores.

2. In BRYOPHYTES, which generation is dominant?

A) Sporophyte generation
B) Gametophyte generation
C) Zygote generation
D) Spore generation

3. Which types of plants have a dominant sporophyte generation?

A) Only Bryophytes
B) Bryophytes, Pteridophytes, Gymnosperms, and Angiosperms
C) Pteridophytes, Gymnosperms, and Angiosperms
D) Only seed-bearing plants

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

A) It allows plants to reproduce asexually.
B) Fertilization and dispersal can be timed with environmental conditions.
C) It requires less water for reproduction.
D) It leads to smaller gametophytes.

5. What do pollen grains in seed-bearing plants contain when mature?

A) Zygotes
B) Sporophytes
C) Male gametophytes
D) Embryos

6. BRYOPHYTES are described as the most primitive land plants. What is a key environmental requirement for their life cycle?

A) Arid deserts
B) Moist and shady environments
C) Open grasslands
D) High altitudes

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

A) They cannot survive drying out.
B) They can withstand long periods of drying and spring back to life.
C) They require constant submersion in water.
D) They only grow in very humid air.

8. Which of the following is NOT a type of bryophyte mentioned in the text?

A) Mosses
B) Liverworts
C) Ferns
D) Hornworts

9. In the context of plant life cycles, 'gamete' refers to a:

A) Reproductive cell
B) Spore
C) Zygote
D) Seed

10. What process is involved in the formation of spores from diploid cells in plants?

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

11. The 'capsule' in bryophytes is also known as a:

A) Gametophyte
B) Sporophyte
C) Sporangium
D) Rhizoid

12. Bryophytes are dependent on water to complete their life cycle. This dependence is primarily for:

A) Photosynthesis
B) Nutrient absorption
C) Reproduction (fertilization)
D) Structural support

13. What are 'rhizoids' in bryophytes?

A) True roots
B) Leaf-like structures
C) Structures for anchorage
D) Reproductive organs

14. The stage that follows fertilization in a plant life cycle is the:

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

15. Vascular plants include which of the following groups?

A) Bryophytes only
B) Pteridophytes, Gymnosperms, and Angiosperms
C) Mosses and Liverworts
D) Algae

16. The term 'thallus' is mentioned in relation to the gametophyte of some plants. What does it typically describe?

A) A complex root system
B) A simple, undifferentiated plant body
C) A woody stem
D) A flower structure

17. Which of the following is a process that occurs during the development of a gametophyte from a spore?

A) Meiosis
B) Fertilization
C) Mitosis
D) Sporulation

18. What is the primary function of the sporophyte generation in vascular plants?

A) To produce gametes
B) To absorb water
C) To produce spores
D) To anchor the plant

19. The male gametophyte develops from a:

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

20. The text states that bryophytes 'do not have' true roots, stems, or leaves. This indicates they are:

A) Highly evolved plants

B) Non-vascular plants

C) Seed-producing plants

D) Flowering plants