

Pteridophyte Life Cycle and Anatomy

Botany · Practice Test · 23 Questions

1. Pteridophytes are considered an intermediate group of plants between which two other plant groups?

- A) Algae and Bryophytes
- B) Bryophytes and Seed Plants
- C) Seed Plants and Gymnosperms
- D) Gymnosperms and Angiosperms

2. What are the two main generations in the life cycle of a fern?

- A) Sporophyte and Zygote
- B) Gametophyte and Embryo
- C) Sporophyte and Gametophyte
- D) Sorus and Prothallus

3. The sporophyte generation in ferns is characterized by being:

- A) Haploid
- B) Diploid
- C) Triploid
- D) Asexual

4. Meiosis in the fern life cycle occurs in which structure to produce spores?

- A) Gametophyte
- B) Sporangium
- C) Archegonium
- D) Protonema

5. The haploid gametophyte generation of a fern is also known as the:

- A) Sporophyte
- B) Embryo
- C) Prothallus
- D) Rhizome

6. What is the function of the sporangium in the fern life cycle?

- A) To produce gametes
- B) To produce spores
- C) To absorb water
- D) To protect the embryo

7. Ferns possess vascular tissue, which allows them to be better adapted to:

- A) Aquatic environments
- B) Living on land
- C) Very cold climates
- D) Desert conditions

8. A limitation on the distribution of ferns, similar to bryophytes, is the water-dependent nature of which part of their life cycle?

- A) Sporophyte generation
- B) Spore dispersal
- C) Sexual reproduction
- D) Rhizome growth

9. The underground stem of a fern plant is called a:

- A) Frond
- B) Rhizome
- C) Pinnule
- D) Fiddlehead

10. What are the roots that grow from the rhizome of a fern called?

- A) Tap roots
- B) Fibrous roots
- C) Adventitious roots
- D) Aerial roots

11. The coiled, young fern leaf is commonly referred to as a:

- A) Frond
- B) Rhizome
- C) Fiddlehead
- D) Pinna

12. The entire fern leaf is called a:

- A) Frond
- B) Pinna
- C) Rachis
- D) Pinnule

13. The stalk of a fern leaf is known as the:

- A) Frond
- B) Pinna
- C) Rachis
- D) Pinnule

14. A 'sorus' on the underside of a fern leaf is a cluster of:

- A) Gametophytes
- B) Embryos
- C) Sporangia
- D) Rhizoids

15. The female sex organ in the gametophyte generation of a fern is called the:

- A) Antheridium
- B) Archegonium
- C) Sporangium
- D) Ovary

16. The male sex organ in the gametophyte generation of a fern is called the:

- A) Antheridium
- B) Archegonium
- C) Sporangium
- D) Testis

17. The prothallus, a heart-shaped structure, is the visible form of the fern's:

- A) Sporophyte generation
- B) Gametophyte generation
- C) Embryonic stage
- D) Adult sporophyte

18. What substance is found within the sporangium and is released to form new gametophytes?

- A) Sperm
- B) Eggs
- C) Spores
- D) Zygotes

19. The structure that covers a sorus in some ferns, providing protection, is called the:

- A) Rhizome
- B) Indusium
- C) Protonema
- D) Pinnule

20. Which of the following is a characteristic of the sporophyte generation in ferns?

- A) It is haploid and produces gametes.
- B) It is diploid and produces spores.
- C) It is haploid and produces spores.
- D) It is diploid and produces gametes.

21. The 'protonema' is an early growth stage of the fern's:

- A) Sporophyte
- B) Gametophyte
- C) Embryo
- D) Seed

22. Fertilization in ferns requires water for the movement of:

- A) Spores
- B) Ova
- C) Sperm
- D) Zygotes

23. A 'compound leaf' in ferns means the leaf is divided into smaller units called:

- A) Pinnae
- B) Pinnules
- C) Rachises
- D) Sori