

Hard Botany Trivia

Botany · Answer Key · 25 Questions

1. In what year did Carl Linnaeus publish the first edition of 'Species Plantarum', establishing the binomial nomenclature system for plants?

- A) 1735
- B) 1753**
- C) 1762
- D) 1778

2. Approximately how many species of flowering plants (angiosperms) have been described and scientifically named to date?

- A) 150,000
- B) 350,000**
- C) 600,000
- D) 1,000,000

3. Gregor Mendel published his landmark paper 'Versuche über Pflanzen-Hybriden' (Experiments on Plant Hybridization) in which year?

- A) 1859
- B) 1865**
- C) 1882
- D) 1899

4. The oldest known fossil of a vascular plant, Cooksonia, dates back to approximately how many million years ago?

- A) 250
- B) 325
- C) 425**
- D) 510

5. How many chromosomes are typically present in the somatic cells of the common model organism *Arabidopsis thaliana*?

- A) 8
- B) 10**
- C) 12
- D) 14

6. In 1665, who coined the term 'cell' while observing cork tissue under a microscope, as documented in 'Micrographia'?

A) Antonie van Leeuwenhoek

B) Robert Hooke

C) Marcello Malpighi

D) Nehemiah Grew

7. What is the approximate number of recognized extant species in the family Orchidaceae, one of the largest families of flowering plants?

A) 5,000

B) 12,000

C) 28,000

D) 50,000

8. The International Code of Nomenclature for algae, fungi, and plants (ICN) was established to regulate plant naming; the current Melbourne Code resulted from the IBC held in which year?

A) 2005

B) 2011

C) 2017

D) 2023

9. Which botanist is credited with the discovery of the 'double fertilization' process in angiosperms in 1898?

A) Sergei Nawaschin

B) Eduard Strasburger

C) Wilhelm Pfeffer

D) Julius von Sachs

10. Approximately what percentage of all known terrestrial plant species are currently classified as bryophytes?

A) 2%

B) 10%

C) 25%

D) 40%

11. The genus 'Rafflesia', which contains the world's largest individual flower, was first formally described by scientists in which year?

A) 1792

B) 1821

C) 1855

D) 1888

12. How many petals are typically found in the flowers of the family Brassicaceae?

- A) 3
- B) 4**
- C) 5
- D) 6

13. In 1804, Nicholas-Théodore de Saussure published 'Recherches Chimiques sur la Végétation', which quantified the uptake of which gas during photosynthesis?

- A) Oxygen
- B) Nitrogen
- C) Carbon dioxide**
- D) Hydrogen

14. The first successful synthesis of the plant hormone auxin (indole-3-acetic acid) occurred in which decade?

- A) 1910s
- B) 1930s**
- C) 1950s
- D) 1970s

15. As of the latest APG IV classification, how many botanical orders are recognized within the angiosperms?

- A) 42
- B) 64**
- C) 88
- D) 102

16. The 'Rubisco' enzyme, essential for carbon fixation, is estimated to account for what fraction of the total soluble protein in leaves?

- A) 1/10
- B) 1/2**
- C) 1/4
- D) 1/20

17. In what year did the British Royal Botanic Gardens, Kew, officially open to the public?

- A) 1759
- B) 1820
- C) 1841**
- D) 1866

18. How many species of the genus 'Ginkgo' survive today in the wild?

- A) 1
- B) 3
- C) 7
- D) 12

19. The 'C4' photosynthetic pathway, which minimizes photorespiration, was elucidated in detail by Hatch and Slack in what year?

- A) 1955
- B) 1966
- C) 1978
- D) 1982

20. How many stamens are traditionally found in the flowers of the genus 'Lilium'?

- A) 3
- B) 6
- C) 9
- D) 12

21. The publication 'De Materia Medica', a foundational text for medicinal botany, was written by Dioscorides in approximately which century?

- A) 1st Century AD
- B) 3rd Century BC
- C) 5th Century AD
- D) 8th Century AD

22. What is the approximate number of known living species of gymnosperms?

- A) 200
- B) 600
- C) 1,100
- D) 2,500

23. The 'Golden Age' of plant exploration during which Joseph Banks traveled with James Cook occurred in the:

- A) 1740s
- B) 1760s
- C) 1790s
- D) 1810s

24. How many carbon atoms are present in a single molecule of chlorophyll a?

A) 45

B) 55

C) 65

D) 75

25. In 1953, the structure of DNA was confirmed, but in which year did plant physiologist Melvin Calvin describe the 'Calvin Cycle' for the first time?

A) 1948

B) 1950

C) 1954

D) 1960