SCHOLAREYE.XYZ • BIOLOGY MCQ SERIES



KINGDOM PLANTAE

50 Solved Biology MCQs

Ticked • Highlighted • Fully Explained

scholareye.xyz

Contents & How to Use

Each question shows four options. The **correct answer is highlighted in green with a tick**, followed by a short explanation. Tap any item below to jump straight to it.

Section 1: Plant Kingdom Basics	**Q1–10**
Section 2: Algae & Bryophytes	**Q11–20**
Section 3: Pteridophytes & Gymnosperms	**Q21–30**
Section 4: Angiosperms & Plant Tissues	**Q31–40**
Section 5: Physiology & Reproduction	**Q41–50**

Quick Answer Key → (last page before the end)

Did you know? Try covering the options first, answer from memory, then check the tick!

Section 1: Plant Kingdom Basics

Questions 1 – 10

Q1	Plants are mainly:
○	A. Unicellular heterotrophic eukaryotes
○	B. Multicellular heterotrophic prokaryotes
○	C. Unicellular autotrophic prokaryotes
✔	**D. Multicellular autotrophic eukaryotes**

✔ **Answer: D**
Explanation: They make food by photosynthesis and have cellulose cell walls.

Q2	The plant cell wall is made mainly of:
○	A. Chitin
○	B. Peptidoglycan
✔	**C. Cellulose**
○	D. Keratin

✔ **Answer: C**
Explanation: Cellulose microfibrils give plant cell walls their strength.

Q3	The green pigment that traps light energy is:
○	A. Carotene
✔	**B. Chlorophyll**
○	C. Xanthophyll
○	D. Haemoglobin

✔ **Answer: B**
Explanation: Chlorophyll absorbs mostly red and blue light and reflects green.

Q4	Photosynthesis takes place in:
○	A. Mitochondria
✔	**B. Chloroplasts**
○	C. Ribosomes
○	D. Lysosomes

✔ **Answer: B**
Explanation: Light and dark reactions occur in the thylakoids and stroma.

Q5	Plant cells store extra food mainly as:
✔	**A. Starch**
○	B. Glycogen
○	C. Chitin
○	D. Lactose

✔ **Answer: A**
Explanation: Animals store glycogen; plants store starch.

Q6	Which structure is found in plant cells but NOT in animal cells?
○	A. Nucleus
○	B. Mitochondrion
○	C. Ribosome
✔	**D. Large central vacuole**

✔ **Answer: D**
Explanation: The vacuole maintains turgor pressure and stores water and solutes.

Q7	Alternation of generations in plants is between:
○	A. Zygote and embryo
○	B. Root and shoot
✔	**C. Sporophyte and gametophyte**
○	D. Male and female

✔ **Answer: C**
Explanation: A diploid sporophyte alternates with a haploid gametophyte.

Q8	The sporophyte generation is:
○	A. Haploid (n)
○	B. Triploid (3n)
✔	**C. Diploid (2n)**
○	D. Always unicellular

✔ **Answer: C**
Explanation: Sporophytes produce haploid spores by meiosis.

Q9	Plants without true roots, stems or leaves are called:
○	A. Pteridophytes
✔	**B. Thallophytes**
○	C. Gymnosperms
○	D. Angiosperms

✔ **Answer: B**
Explanation: Algae have a simple undifferentiated body called a thallus.

Q10	Seed-producing plants are called:
✔	**A. Spermatophytes**
○	B. Cryptogams
○	C. Thallophytes
○	D. Bryophytes

✔ **Answer: A**
Explanation: Gymnosperms and angiosperms are the seed-bearing plants.

Did you know? Marine algae and other tiny ocean plants produce roughly half of the oxygen on Earth!

Section 2: Algae & Bryophytes

Questions 11 – 20

Q11	Algae are mostly:
○	A. Parasitic
○	B. Terrestrial only
○	C. Heterotrophic
✔	**D. Aquatic and photosynthetic**

✔ **Answer: D**
Explanation: They have chlorophyll but lack true roots, stems and leaves.

Q12	Spirogyra is a:
○	A. Brown alga
○	B. Red alga
○	C. Fern
✔	**D. Green alga**

✔ **Answer: D**
Explanation: It has ribbon-like spiral chloroplasts in filamentous cells.

Q13	Brown algae owe their colour to:
○	A. Phycoerythrin
○	B. Chlorophyll b
✔	**C. Fucoxanthin**
○	D. Anthocyanin

✔ **Answer: C**
Explanation: Fucoxanthin masks chlorophyll and gives a brown colour.

Q14	Red algae contain the pigment:
○	A. Fucoxanthin
✔	**B. Phycoerythrin**
○	C. Xanthophyll
○	D. Carotene

✔ **Answer: B**
Explanation: It absorbs blue light, allowing some red algae to live in deeper water.

Q15	Agar is obtained from:
✔	**A. Red algae**
○	B. Green algae
○	C. Brown algae
○	D. Mosses

✔ **Answer: A**
Explanation: Species such as Gelidium yield agar used in culture media.

Q16	Bryophytes include:
✔	**A. Mosses and liverworts**
○	B. Ferns and horsetails
○	C. Pines and cycads
○	D. Algae and fungi

✔ **Answer: A**
Explanation: They are non-vascular land plants.

Q17	**Bryophytes are called the “amphibians of the plant kingdom” because they:**
○	A. Live in salt water
○	B. Have lungs
○	C. Have gills
✔	**D. Need water for fertilisation**

✔ **Answer: D**
Explanation: Sperms must swim through water to reach the egg.

Q18	**The dominant generation in bryophytes is the:**
○	A. Sporophyte
○	B. Zygote
✔	**C. Gametophyte**
○	D. Embryo

✔ **Answer: C**
Explanation: The haploid gametophyte is the leafy, photosynthetic body.

Q19	Moss plants anchor themselves by:
○	A. True roots
✔	**B. Rhizoids**
○	C. Root hairs
○	D. Tendrils

✔ **Answer: B**
Explanation: Rhizoids are thread-like and lack vascular tissue.

Q20	Which of these is a bryophyte?
○	A. Pteris
✔	**B. Funaria**
○	C. Pinus
○	D. Cycas

✔ **Answer: B**
Explanation: Funaria is a common moss.

Did you know? Mosses and their relatives were among the first plants to live on land, over 400 million years ago.

Section 3: Pteridophytes & Gymnosperms

Questions 21 – 30

Q21	Ferns belong to:
✔	**A. Pteridophytes**
○	B. Bryophytes
○	C. Gymnosperms
○	D. Algae

✔ **Answer: A**
Explanation: Pteridophytes were the first land plants with vascular tissue.

Q22	Pteridophytes do NOT produce:
○	A. Spores
○	B. Xylem
○	C. Roots
✔	**D. Seeds**

✔ **Answer: D**
Explanation: They reproduce by spores, not seeds.

Q23 **The dominant generation in ferns is the:**

- ○ A. Gametophyte
- ○ B. Protonema
- ✔ **C. Sporophyte**
- ○ D. Zygote

✔ **Answer: C**
Explanation: The leafy fern plant is the diploid sporophyte.

Q24 **The small heart-shaped gametophyte of a fern is the:**

- ○ A. Protonema
- ○ B. Sorus
- ✔ **C. Prothallus**
- ○ D. Rhizome

✔ **Answer: C**
Explanation: It bears the antheridia and archegonia.

Q25 **Clusters of sporangia on fern leaves are called:**

- ○ A. Strobili
- ✔ **B. Sori**
- ○ C. Cones
- ○ D. Capsules

✔ **Answer: B**
Explanation: Sori often appear as brown dots under the fronds.

Q26	Gymnosperms have seeds that are:
✔	**A. Naked**
○	B. Enclosed in fruit
○	C. Absent
○	D. Enclosed in a pod

✔ **Answer: A**
Explanation: “Gymnosperm” means naked seed.

Q27	Pinus bears its reproductive structures in:
○	A. Flowers
○	B. Sori
○	C. Capsules
✔	**D. Cones**

✔ **Answer: D**
Explanation: Male and female cones occur separately on the same plant.

Q28 **Which of these is a gymnosperm?**

- ○ A. Mango
- ○ B. Wheat
- ○ C. Rose
- ✔ **D. Cycas**

✔ **Answer: D**
Explanation: Cycas is a cycad with large feathery leaves.

Q29 **Vessels are generally absent in the xylem of:**

- ○ A. Angiosperms
- ○ B. Dicots
- ✔ **C. Gymnosperms**
- ○ D. Monocots

✔ **Answer: C**
Explanation: Gymnosperms rely mainly on tracheids to conduct water.

Q30	The tallest tree, the coast redwood (Sequoia), is a:
○	A. Angiosperm
✔	**B. Gymnosperm**
○	C. Pteridophyte
○	D. Bryophyte

✔ **Answer: B**
Explanation: It belongs to the conifers.

Did you know? Coast redwoods can grow taller than 100 metres, the tallest trees on Earth.

Section 4: Angiosperms & Plant Tissues

Questions 31 – 40

Q31	Angiosperms are:
✔	**A. Flowering plants with seeds in fruits**
○	B. Cone-bearing plants
○	C. Spore-bearing plants
○	D. Non-vascular plants

✔ **Answer: A**
Explanation: Seeds develop inside an ovary, which becomes the fruit.

Q32 **Plants with a single cotyledon in the seed are:**

- ✔ **A. Monocots**
- ○ B. Dicots
- ○ C. Gymnosperms
- ○ D. Pteridophytes

✔ **Answer: A**
Explanation: Wheat, maize and rice are monocots.

Q33 **Parallel venation is typical of:**

- ○ A. Dicot leaves
- ○ B. Fern fronds
- ○ C. Pine needles
- ✔ **D. Monocot leaves**

✔ **Answer: D**
Explanation: Veins run side by side in monocot leaves.

Q34 **Tap roots are usually found in:**

- ○ A. Monocots
- ○ B. Mosses
- ✔ **C. Dicots**
- ○ D. Ferns

✔ **Answer: C**
Explanation: Monocots usually have fibrous roots.

Q35 **Vascular bundles are scattered in the stem of:**

- ○ A. Dicots
- ✔ **B. Monocots**
- ○ C. Gymnosperms
- ○ D. Bryophytes

✔ **Answer: B**
Explanation: In dicots they are arranged in a ring.

Q36 **Water and minerals are carried upward by:**

- ○ A. Phloem
- ✔ **B. Xylem**
- ○ C. Cambium
- ○ D. Epidermis

✔ **Answer: B**
Explanation: Xylem conducts water from the roots to the leaves.

Q37	Prepared food is transported through:
✔	A. Phloem
○	B. Xylem
○	C. Cortex
○	D. Pith

✔ **Answer: A**
Explanation: Sieve tubes carry sugars from leaves to other parts.

Q38	Secondary growth occurs through the activity of:
○	A. Epidermis
○	B. Cortex
○	C. Pith
✔	D. Cambium

✔ **Answer: D**
Explanation: Vascular cambium adds secondary xylem and phloem.

Q39	Stomata are mainly responsible for:
○	A. Absorbing minerals
○	B. Food storage
✔	**C. Gas exchange and transpiration**
○	D. Seed dispersal

✔ **Answer: C**
Explanation: Guard cells open and close the stomatal pores.

Q40	Meristematic tissue consists of:
○	A. Dead cells
○	B. Food-storing cells
✔	**C. Actively dividing cells**
○	D. Supporting cells only

✔ **Answer: C**
Explanation: Found at root and shoot tips, it is responsible for growth.

Did you know? Flowering plants first appeared over 100 million years ago and are now the most diverse group of land plants.

Section 5: Physiology & Reproduction

Questions 41 – 50

Q41 **The male reproductive part of a flower is the:**

- ○ A. Pistil
- ✔ **B. Stamen**
- ○ C. Sepal
- ○ D. Carpel

✔ **Answer: B**
Explanation: A stamen has an anther and a filament.

Q42 **The female reproductive part of a flower is the:**

- ✔ **A. Carpel (pistil)**
- ○ B. Stamen
- ○ C. Petal
- ○ D. Anther

✔ **Answer: A**
Explanation: It consists of the stigma, style and ovary.

Q43 **Transfer of pollen from anther to stigma is called:**

- ○ A. Fertilisation
- ○ B. Germination
- ○ C. Transpiration
- ✔ **D. Pollination**

✔ **Answer: D**
Explanation: It can occur by wind, insects, water or animals.

Q44 **Double fertilisation is characteristic of:**

- ○ A. Gymnosperms
- ○ B. Ferns
- ○ C. Mosses
- ✔ **D. Angiosperms**

✔ **Answer: D**
Explanation: One sperm forms the zygote and the other forms the endosperm.

Q45 After fertilisation, the ovary develops into a:

- ○ A. Seed
- ○ B. Embryo
- ✔ **C. Fruit**
- ○ D. Stem

✔ **Answer: C**
Explanation: The ovules inside the ovary become seeds.

Q46 The first root to emerge from a germinating seed is the:

- ○ A. Plumule
- ✔ **B. Radicle**
- ○ C. Cotyledon
- ○ D. Stamen

✔ **Answer: B**
Explanation: The plumule grows into the shoot.

Q47	Loss of water vapour from leaves is called:
✔	**A. Transpiration**
○	B. Translocation
○	C. Respiration
○	D. Fermentation

✔ **Answer: A**
Explanation: It creates a pull that draws water up the xylem.

Q48	The plant hormone that promotes stem elongation is:
✔	**A. Auxin**
○	B. Abscisic acid
○	C. Ethylene
○	D. Cytokinin

✔ **Answer: A**
Explanation: Auxin also controls the bending of shoots towards light.

Q49 **The raw materials for photosynthesis are:**

- ○ A. Oxygen and glucose
- ○ B. Nitrogen and water
- ○ C. Oxygen and carbon dioxide
- ✔ **D. Carbon dioxide and water**

✔ **Answer: D**
Explanation: Light energy converts them into glucose and oxygen.

Q50 **Which of these is an insectivorous plant?**

- ○ A. Cactus
- ○ B. Banyan
- ✔ **C. Venus flytrap**
- ○ D. Maize

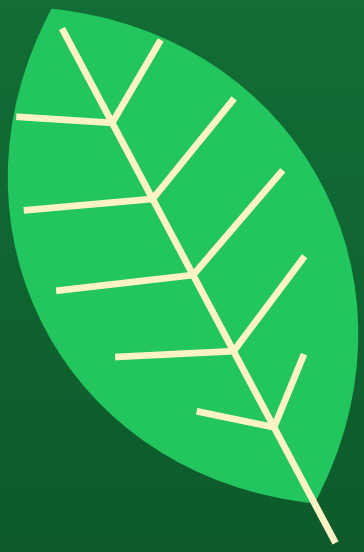
✔ **Answer: C**
Explanation: It traps insects to gain nitrogen in poor soil.

Did you know? Some bamboo species can grow up to about 90 centimetres in a single day!

Quick Answer Key

Tap a question to jump back to its explanation.

Q1 → D	Q11 → D	Q21 → A	Q31 → A	Q41 → B
Q2 → C	Q12 → D	Q22 → D	Q32 → A	Q42 → A
Q3 → B	Q13 → C	Q23 → C	Q33 → D	Q43 → D
Q4 → B	Q14 → B	Q24 → C	Q34 → C	Q44 → D
Q5 → A	Q15 → A	Q25 → B	Q35 → B	Q45 → C
Q6 → D	Q16 → A	Q26 → A	Q36 → B	Q46 → B
Q7 → C	Q17 → D	Q27 → D	Q37 → A	Q47 → A
Q8 → C	Q18 → C	Q28 → D	Q38 → D	Q48 → A
Q9 → B	Q19 → B	Q29 → C	Q39 → C	Q49 → D
Q10 → A	Q20 → B	Q30 → B	Q40 → C	Q50 → C



Great Job, Scholar!

You have completed all 50 MCQs
on Kingdom Plantae.
Revise the explanations and ace your test!

Visit scholareye.xyz

More free MCQs • Notes • Online tests

© ScholarEye.xyz — Learn. Practice. Succeed.