

## **Quiz: Botany set 9**

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**Q401: Which taxonomic aid provides step-wise identification using paired contrasting characters?**

- A) Flora
- B) Monograph
- C) Key
- D) Manual

**Q402: Which algal pigment masks chlorophyll in brown algae?**

- A) Phycoerythrin
- B) Phycocyanin
- C) Fucoxanthin
- D) Carotene

**Q403: Which plant group shows dominant gametophyte generation?**

- A) Gymnosperms
- B) Angiosperms
- C) Pteridophytes
- D) Bryophytes

**Q404: The edible part of maize grain is:**

- A) Pericarp
- B) Endosperm
- C) Cotyledon
- D) Scutellum

**Q405: Which tissue is responsible for protection in plants?**

- A) Parenchyma
- B) Meristem
- C) Epidermal tissue system
- D) Vascular tissue

**Q406: Caspary strips are made up of:**

- A) Cellulose
- B) Lignin
- C) Suberin
- D) Pectin

**Q407: Which organelle contains hydrolytic enzymes?**

- A) Golgi apparatus
- B) Peroxisome
- C) Lysosome
- D) Mitochondria

**Q408: Which biomolecule forms the genetic material in most organisms?**

- A) Protein
- B) RNA
- C) DNA
- D) Carbohydrate

**Q409: Which phase of cell cycle shows duplication of DNA?**

- A) G1
- B) S
- C) G2
- D) M

**Q410: Which process explains movement of water through cell membrane?**

- A) Diffusion
- B) Active transport
- C) Osmosis
- D) Mass flow

**Q411: Which macronutrient is required for synthesis of chlorophyll?**

- A) Nitrogen
- B) Magnesium
- C) Potassium
- D) Calcium

**Q412: Which pigment participates directly in light reaction?**

- A) Chlorophyll a
- B) Chlorophyll b
- C) Carotene
- D) Xanthophyll

**Q413: Which compound is the first stable product of C4 pathway?**

- A) 3-PGA
- B) RuBP
- C) Oxaloacetic acid
- D) Malic acid

**Q414: Which respiratory step produces maximum ATP?**

- A) Glycolysis
- B) Krebs cycle
- C) Electron transport chain
- D) Fermentation

**Q415: Which plant hormone promotes cell elongation in stems?**

- A) Auxin
- B) Cytokinin
- C) Ethylene
- D) Abscisic acid

**Q416: Which structure nourishes the developing pollen grains?**

- A) Endothecium
- B) Tapetum
- C) Middle layer
- D) Epidermis

**Q417: Which breeding method exploits heterosis?**

- A) Inbreeding
- B) Pureline selection
- C) Hybridisation
- D) Mutation breeding

**Q418: Which microorganism is used for production of statins?**

- A) Penicillium notatum
- B) Rhizopus
- C) Monascus purpureus
- D) Aspergillus niger

**Q419: Which enzyme synthesises RNA using DNA template?**

- A) DNA polymerase
- B) RNA polymerase
- C) Ligase
- D) Reverse transcriptase

**Q420: Which term represents number of individuals added per unit time?**

- A) Mortality
- B) Natality
- C) Density
- D) Dispersion

**Q421: Which trophic level has maximum energy?**

- A) Producers
- B) Primary consumers
- C) Secondary consumers
- D) Tertiary consumers

**Q422: Which biodiversity pattern shows more species in tropics?**

- A) Latitudinal gradient
- B) Species-area relationship
- C) Island biogeography
- D) Succession

**Q423: Which pollutant is responsible for depletion of ozone layer?**

- A) CO<sub>2</sub>
- B) SO<sub>2</sub>
- C) CFCs
- D) NO<sub>2</sub>

**Q424: Which taxonomic aid gives detailed information about a single species or genus?**

- A) Flora
- B) Manual
- C) Monograph
- D) Catalogue

**Q425: Which algae shows haplontic life cycle?**

- A) Fucus
- B) Ectocarpus
- C) Ulothrix
- D) Polysiphonia

**Q426: Which tissue is responsible for mechanical strength in plants?**

- A) Parenchyma
- B) Collenchyma
- C) Sclerenchyma
- D) Phloem

**Q427: Which plastid stores starch?**

- A) Chloroplast
- B) Chromoplast
- C) Amyloplast
- D) Elaioplast

**Q428: Which nitrogenous base is present only in RNA?**

- A) Adenine
- B) Thymine
- C) Cytosine
- D) Uracil

**Q429: Which stage of meiosis shows terminalisation of chiasmata?**

- A) Pachytene
- B) Diplotene
- C) Diakinesis
- D) Metaphase I

**Q430: Which phenomenon explains upward movement of water in plants?**

- A) Root pressure
- B) Capillarity
- C) Transpiration pull
- D) Diffusion

**Q431: Which micronutrient is a component of plastocyanin?**

- A) Iron
- B) Copper
- C) Zinc
- D) Manganese

**Q432: Which pathway fixes CO<sub>2</sub> at night?**

- A) C<sub>3</sub> pathway
- B) C<sub>4</sub> pathway
- C) CAM pathway
- D) Calvin cycle

**Q433: Which respiratory substrate gives RQ greater than 1?**

- A) Carbohydrates
- B) Proteins
- C) Fats
- D) Organic acids

**Q434: Which hormone promotes fruit ripening?**

- A) Auxin
- B) Gibberellin
- C) Ethylene
- D) Cytokinin

**Q435: Which part of ovule forms seed coat?**

- A) Nucellus
- B) Integuments
- C) Funiculus
- D) Chalaza

**Q436: Which breeding method transfers a single desirable gene to elite variety?**

- A) Mass selection
- B) Pureline selection
- C) Backcrossing
- D) Mutation breeding

**Q437: Which microorganism is used for production of ethanol?**

- A) Acetobacter
- B) *Saccharomyces cerevisiae*
- C) Rhizobium
- D) Nitrosomonas

**Q438: Which technique separates DNA fragments based on size?**

- A) PCR
- B) ELISA
- C) Gel electrophoresis
- D) Blotting

**Q439: Which dispersion pattern shows individuals grouped in patches?**

- A) Random
- B) Uniform
- C) Clumped
- D) Regular

**Q440: Which ecological pyramid is always upright?**

- A) Pyramid of numbers
- B) Pyramid of biomass
- C) Pyramid of energy
- D) All pyramids

**Q441: Which biome is characterised by tall grasses with scattered trees?**

- A) Tundra
- B) Savanna
- C) Taiga
- D) Desert

**Q442: Which gas is responsible for acid rain?**

- A) CO<sub>2</sub>
- B) SO<sub>2</sub>
- C) CH<sub>4</sub>
- D) N<sub>2</sub>

**Q443: Which system of classification considers evolutionary relationships?**

- A) Artificial
- B) Natural
- C) Phylogenetic
- D) Numerical

**Q444: Which algae is used as source of carrageenan?**

- A) Gelidium
- B) Gracilaria
- C) Sargassum
- D) Ulothrix

**Q445: Which tissue lies just inside epidermis in dicot stem?**

- A) Endodermis
- B) Cortex
- C) Pericycle
- D) Pith

**Q446: Which plastid is involved in photosynthesis?**

- A) Chloroplast
- B) Chromoplast
- C) Amyloplast
- D) Leucoplast

**Q447: Which nitrogenous base is present only in DNA?**

- A) Adenine
- B) Guanine
- C) Cytosine
- D) Thymine

**Q448: Which stage of mitosis involves condensation of chromosomes?**

- A) Prophase
- B) Metaphase
- C) Anaphase
- D) Telophase

**Q449: Which force is mainly responsible for ascent of sap?**

- A) Root pressure
- B) Capillarity
- C) Transpiration pull
- D) Diffusion

**Q450: Which international agreement focuses on climate change mitigation?**

- A) Montreal Protocol
- B) Ramsar Convention
- C) Kyoto Protocol
- D) Stockholm Convention