

## **Quiz: Botany set 3**

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**Q101: Which taxonomic aid provides information about species through preserved plant specimens mounted on sheets?**

- A) Botanical garden
- B) Herbarium
- C) Museum
- D) Key

**Q102: Which group of algae possesses chlorophyll a and b and stores food as starch?**

- A) Rhodophyceae
- B) Phaeophyceae
- C) Chlorophyceae
- D) Cyanophyceae

**Q103: Archegonia are absent in:**

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

**Q104: Which floral part develops into fruit after fertilisation?**

- A) Ovule
- B) Ovary
- C) Thalamus
- D) Calyx

**Q105: In dicot stem, vascular bundles are:**

- A) Scattered
- B) Radial
- C) Conjoint and open
- D) Conjoint and closed

**Q106: Which cell organelle is involved in protein synthesis?**

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

**Q107: Which polysaccharide is a major component of plant cell wall?**

- A) Starch
- B) Glycogen
- C) Cellulose
- D) Chitin

**Q108: Which stage of cell cycle is the longest?**

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

**Q109: Movement of molecules from higher to lower concentration without energy is:**

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

**Q110: Which element is essential for opening and closing of stomata?**

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

**Q111: Which compound acts as primary CO<sub>2</sub> acceptor in C3 plants?**

- A) Oxaloacetic acid
- B) Phosphoenol pyruvate
- C) Ribulose bisphosphate
- D) Malic acid

**Q112: Glycolysis occurs in:**

- A) Mitochondrial matrix
- B) Cytoplasm
- C) Chloroplast
- D) Peroxisome

**Q113: Which plant hormone is responsible for apical dominance?**

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

**Q114: Syngamy refers to:**

- A) Fusion of polar nuclei
- B) Fusion of gametes
- C) Fusion of endosperm nuclei
- D) Fusion of antipodals

**Q115: Which crop variety was developed by hybridisation?**

- A) Sharbati Sonora
- B) Pusa Gaurav
- C) Kalyan Sona
- D) IR-8

**Q116: Which bacterium is used as biofertiliser in rice fields?**

- A) Rhizobium
- B) Azospirillum
- C) Anabaena
- D) Nitrosomonas

**Q117: Plasmid used as vector should have:**

- A) Multiple origins of replication
- B) Selectable marker
- C) Large size
- D) No restriction sites

**Q118: Carrying capacity of environment is represented by:**

- A) K
- B) r
- C) N
- D) t

**Q119: Which component returns nutrients to the soil?**

- A) Producers
- B) Consumers
- C) Decomposers
- D) Herbivores

**Q120: The number of species on Earth is estimated to be about:**

- A) 1.5 million
- B) 3 million
- C) 7 million
- D) 10 million

**Q121: Which pollutant causes eutrophication?**

- A) Carbon monoxide
- B) Nitrates and phosphates
- C) Sulphur dioxide
- D) Methane

**Q122: Which category includes closely related genera?**

- A) Species
- B) Genus
- C) Family
- D) Order

**Q123: Reserve food in brown algae is:**

- A) Starch
- B) Floridean starch
- C) Laminarin and mannitol
- D) Glycogen

**Q124: Which tissue transports organic food?**

- A) Xylem
- B) Phloem
- C) Cambium
- D) Cortex

**Q125: Cristae increase surface area for:**

- A) Photosynthesis
- B) Protein synthesis
- C) Respiration
- D) Digestion

**Q126: Which bond links monosaccharides?**

- A) Peptide bond
- B) Glycosidic bond
- C) Ester bond
- D) Phosphodiester bond

**Q127: Which substage of prophase I shows synapsis?**

- A) Leptotene
- B) Zygote
- C) Pachytene
- D) Diplotene

**Q128: Mass flow hypothesis explains transport through:**

- A) Xylem
- B) Phloem
- C) Cambium
- D) Cortex

**Q129: Which element is required for synthesis of chlorophyll?**

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

**Q130: Photorespiration occurs in:**

- A) C<sub>3</sub> plants only
- B) C<sub>4</sub> plants only
- C) CAM plants only
- D) All plants

**Q131: Which respiratory pathway is common to aerobic and anaerobic respiration?**

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

**Q132: Which hormone promotes fruit ripening?**

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

**Q133: Embryo sac is formed from:**

- A) Megaspore
- B) Microspore
- C) Zygote
- D) Ovule wall

**Q134: Which breeding method maintains heterozygosity?**

- A) Inbreeding
- B) Pureline selection
- C) Outbreeding
- D) Selfing

**Q135: Which microbe produces streptokinase?**

- A) Streptococcus
- B) Aspergillus
- C) Penicillium
- D) Rhizopus

**Q136: cDNA is synthesised using:**

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

**Q137: Population interaction where both species benefit is:**

- A) Commensalism
- B) Parasitism
- C) Mutualism
- D) Amensalism

**Q138: Secondary productivity refers to:**

- A) Plant biomass production
- B) Consumer biomass production
- C) Decomposer activity
- D) Energy flow

**Q139: In situ conservation includes:**

- A) Seed banks
- B) Botanical gardens
- C) Wildlife sanctuaries
- D) Gene banks

**Q140: Which gas is responsible for ozone depletion?**

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

**Q141: Classification based on evolutionary relationships is called:**

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

**Q142: Which algae shows alternation of generations?**

- A) Ulothrix
- B) Spirogyra
- C) Ectocarpus
- D) Chlamydomonas

**Q143: Pericycle is involved in formation of:**

- A) Lateral roots
- B) Primary xylem
- C) Cortex
- D) Pith

**Q144: Which plastid is colourless?**

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

**Q145: Which biomolecule has the highest energy content?**

- A) Carbohydrates
- B) Proteins
- C) Lipids
- D) Nucleic acids

**Q146: Which phase ends with cytokinesis?**

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

**Q147: Root pressure is significant in:**

- A) Tall trees
- B) Transpiring plants
- C) Herbaceous plants
- D) Desert plants

**Q148: Which deficiency causes delayed flowering?**

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

**Q149: CAM plants open stomata during:**

- A) Day
- B) Night
- C) Evening
- D) Morning

**Q150: Which structure guides pollen tube entry?**

- A) Antipodal cells
- B) Synergids
- C) Nucellus
- D) Integuments