

## Examrace

### Competitive Exams: Botany MCQs (Practice\_Test 6 of 104)

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1. In which one of the following species of Lycopodium are the xylem and phloem nearly uniformly intermixed?
  - a. L. Cernuum
  - b. L. Pucidulum
  - c. L. Selago
  - d. L. annotinum
2. Morphologically, the spice-yielding part of turmeric is
  - a. Seed
  - b. Root
  - c. Dried fruit
  - d. Rhizome
3. The following enzymes participate in the initial CO<sub>2</sub> fixation through Calvin cycle:
  - a. RUBISCO
  - b. Triose phosphate dehydrogenase
  - c. Phosphoglyceric kinase

The correct sequence in which these enzymes participate in CO<sub>2</sub> fixation is

- a. 1,3, 2
  - b. 2,3, 1
  - c. 1,2, 3
  - d. 3,2, 1
4. C<sub>4</sub> plants are more efficient in photosynthesis than C<sub>3</sub> plants because of
    - a. Higher leaf area
    - b. The presence of a large number of chloroplasts
    - c. The presence of a thin cuticle on the leaf surface

- d. Lower photorespiration
5. Chemosynthesis is BEST defined as
- Synthesis of food by chemical means
  - Synthesis of a chemical compound
  - Synthesis of food with energy obtained in a chemical reaction
  - Absorption of food material in various parts of the body
6. Oxygen evolution takes place during photosynthesis in green plants but not in bacterial photosynthesis, because
- Bacteria are prokaryotic and green plants are eukaryotic
  - Only photo system I is present in bacterial photosynthesis
  - Bacterial cell wall composition is different from green plant cell wall
  - Rate of O<sub>2</sub> consumption in bacteria is higher than that in green plants
7. UV or X-ray radiation is NOT suitable for photosynthesis in green plants because such a radiation
- Is not visible
  - Is not absorbed by chlorophyll
  - Causes ionization of chlorophyll
  - Leads to an increase in rotational and vibration energy of chlorophyll
8. Consider the following events:
- Excitation of chlorophyll
  - light absorption
  - Transfer of electron
  - Synthesis of ATP

The correct sequence of these events in photosynthesis is:

- 1,2, 4,3
  - 2,1, 4,3
  - 2,1, 3,4
  - 1,2, 3,4
9. Match List I (Physiological events) with List II (Name of plants) and select the correct answer:

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List-I	List-II
A. C <sub>3</sub> pathway of CO <sub>2</sub> fixation	1. Bryophyllum sp.
B. C <sub>4</sub> pathway of CO <sub>2</sub> fixation	2. Zea mays
C. CAM pathway of CO <sub>2</sub> fixation	3. Triticum aestivum
D. Guttation	4. Lycopodium

**A B C D**

a. 2 3 4 1

b. 2 3 1 4

c. 3 2 4 1

d. 3 2 1 4

10. RuBP carboxyl's is a less efficient enzyme for CO<sub>2</sub> fixation in photosynthesis than PEP carboxyls because
- RuBP is less predominant than PEP in a mesophyll cell
  - RuBP is a 4-carbon sugar phosphate while PEP is a phosphorylated 3-carbon organic acid
  - K<sub>m</sub> value of RuBP carboxyl's for CO<sub>2</sub> is higher than that of PEP carboxyl's
  - the molecular weight of RuBP carboxyl's is larger than that of PEP carboxyl's
11. A copper containing protein linking electron transfer between PS II and PS I is
- Cytochrome a<sub>3</sub>
  - Cytochrome b
  - Plastocyanin
  - Plastoquinone
12. Which one of the following cofactors is NOT involved in the pyruvate dehydrogenate complex?
- Pyridoxal phosphate
  - Thiamine Pyrophosphate
  - Lipoid acid

- d. Coenzyme A
13. The rate of respiration undergoes a sharp rise followed by a when certain fruits ripen. This phenomenon is known as
- Climatic rise
  - Climatic fall
  - Climacteric rise
  - Anaerobiosis
14. The citric acid cycle
- Contains intermediates for amino acid synthesis
  - Generates fewer molecules of ATP than glycol sis
  - Is an anaerobic process
  - Is the major anabolic pathway for glucose synthesis
15. During aerobic respiration, all the ATPs are synthesized as a result of
- Oxidative phosphorylation
  - Oxidative and substrate level phosphorylation
  - Substrate level phosphorylation
  - Oxidative and phosphorylation