

SECTION: I (MCQ's)

Time Allowed: 15 Minutes

Max. Marks: 12

NOTE: Encircle the correct/ best answer in each of the followings. Each Question carries 1 mark. Use of remover carries zero mark. Cutting and Overwriting is not allowed.

No. 79

Roll No. (in fig.) _____

Roll No. (in words) _____

Candidate's Signature _____

Signature of Addl. Supdt. _____

Q1.

- Carbon fixation reactions take place in _____
a) Stroma b) Thylakoid membranes c) Cytosol d) Nucleus
- PSII preferentially absorbs red light of wavelengths _____
a) 680 b) 700 c) Greater than 680 d) Greater than 700
- Matric potential is always _____
a) Zero b) Negative to zero c) Negative d) Positive
- In which of the following steps of Calvin cycle, RUBISCO accepts CO₂?
a) Regeneration b) Reduction c) Carboxylation d) Oxidation
- Which of the following is not a macronutrient?
a) Ca b) Mg c) Nitrogen d) Zn
- In _____ pathway in plants, water moves exclusively through the cell wall without crossing any membranes.
a) Apoplast b) Transmembrane c) Symplast d) Diffusion
- Plants that develop root pressure frequently produce liquid droplets on the edges of their leaves, a phenomenon known as _____
a) Hydathodes b) Dew drops c) Guttation d) Transpiration
- In stomata, biological control is exerted by a pair of specialized epidermal cells called _____
a) Cuticle b) Mesophyll c) Parenchyma d) Guard cells
- In alcoholic fermentation, pyruvate is converted into _____
a) Malate b) Ethanol c) Lactate d) Oxaloacetate
- The stepwise oxidation of one molecule of pyruvate in the mitochondrion gives rise to _____ NADH.
a) One b) Three c) Four d) Six
- Among the living components of ecosystem, which of the following is present at the base?
a) Producers b) Primary consumers c) Tertiary consumers d) Decomposers
- _____ are involved in collecting light and transferring the energy to the reaction center complex during photosynthesis.
a) Flavonoids b) Xanthophyll c) Anthocyanins d) Antenna complex

UNIVERSITY OF EDUCATION
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Subject: Plant Physiology and Ecology

Time Allowed: 75 Minutes.

Max. Marks: 33

Section II (Short Answer)

Q.2- Write short answers of the following.

3x5 = 15

- i. What are the deficiency symptoms of nitrogen?
- ii. How would you define cation exchange capacity?
- iii. How water movement is involved in stomatal regulation?
- iv. What does it mean by water holding capacity of a soil?
- v. Differentiate between water logging and salinity.

Section III (Essay Type)

Answer the following Questions

6x3 = 18

- Q.3:-** Write a comprehensive note on physical and chemical properties of soil.
- Q.4:-** Write a detailed note on steps involved in light reactions of photosynthesis.
- Q.5:-** How energy molecules are generated in Krebs cycle? Write in detail.