



**KERALA AGRICULTURAL UNIVERSITY**  
**B.Sc.(Hons) Forestry 2018 Admission**  
**II Semester Final Examination- August 2019**

Fbti.1203

**Plant Physiology (2+1)**

**Marks: 50**  
**Time: 2 hours**  
**(10x1=10)**

**I Fill in the blanks.**

- 1 Malic acid produced in CAM plants during night is stored in \_\_\_\_\_ of the cell.
- 2 Glycolysis occurs in \_\_\_\_\_ of cell.
- 3 Net gain of ATP molecules during glycolysis is \_\_\_\_\_
- 4 \_\_\_\_\_ is called as Photosynthetically Active Radiation.
- 5 Synthetic Auxin which is used as herbicide is \_\_\_\_\_
- 6 Loss of water in the form of water droplets through plant organs is called \_\_\_\_\_
- 7 Growth of roots with respect to gravity is \_\_\_\_\_
- 8 \_\_\_\_\_ is called as ripening hormone?
- 9 Total energy requirement for fixing one molecule of CO<sub>2</sub> fixation in C<sub>4</sub> plants \_\_\_\_\_
- 10 Highly immobile macro nutrient is \_\_\_\_\_.

**II Write short notes on any FIVE of the following**

**(5x2=10)**

- 1 Antitranspirants
- 2 Arnon's criteria of essentiality
- 3 Alternate respiration.
- 4 C<sub>4</sub> Plants
- 5 Drought avoidance
- 6 Mechanism of stomatal opening
- 7 Anaerobic respiration

**III Answer any FIVE of the following.**

**(5x4=20)**

- 1 Water potential and its components in trees.
- 2 Source – sink relationship in trees.
- 3 RQ values in different substances.
- 4 Differentiate between red drop effect and Emerson enhancement effect.
- 5 Functional role of Mg, Fe and K.
- 6 Factors affecting photosynthesis.
- 7 Importance of plant growth regulators.

**IV Answer any ONE of the following**

**(1x10=10)**

- 1 Photosynthetic electron transport system with diagram.
- 2 Mechanism of carbon fixation in C<sub>3</sub>, C<sub>4</sub> and CAM plants with suitable diagrams.

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