Crps. 1201 **Fundamentals of Crop Physiology (2+1)** **Marks: 50**
Time: 2 hours

I **Fill in the blanks:** (10 x 1=10)

1 Example for a monocarpic perennial ------------
2 Periodic meristematic regions are called ------------

Choose the correct answer

3 Principle cation for maintaining cell turgor.
   a Hydrogen b Nitrogen c Potassium

4 Carbon dioxide reduction occurs in
   a Thylakoid b Storma c Grana

5 Kranz anatomy is shown by
   a C_3 b C_4 c CAM

Name:

6 The formula for calculating crop growth rate (CGR)
7 Pigment involved in light sensitivity of seed.
8 Nutrient essential for auxin biosynthesis in plants.

State True or False:

9 H_2O_2 is produced during photorespiration in plants (T/F)
10 Kaolin is a stomatal closing type antitranspirant (T/F)

II **Write short notes on any FIVE:** (5 x 2=10)

1 Warburg's effect.

2 Mechanism of stomatal opening.
3 Respiratory Quotient (RQ).
4 Give an account on long day plants.
5 Anaerobic respiration and its significance.
6 Cyclic and non cyclic electron transport.
7 What is foliar nutrition and what are the advantages of it?

III **Answer any FIVE:** (5 x 4=20)

1 Biosynthesis, mode of action and commercial use of auxin.
2 Physiological role of Fe, Zn and Magnesium in plants.
3 Give a short account on NAR, CGR, RGR, LAI and Harvest index.
4 Importance and properties of water in relation to plant growth.
5 Explain the growth phases of rice crop.
6 Photosynthetic efficiency and crop productivity.
7 Kreb's cycle.

IV **Write essay on any ONE:** (1 x 10=10)

1 Explain the commercial use of plant growth regulators in agriculture and horticulture.

2 Discuss the mechanism of carbon fixation in C_3, C_4 and CAM plants with suitable diagram.

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