

Eastern University, Sri Lanka

Second Year First Semester Examination in Science-2003/2004 (Jan /Feb, 06)

BT 201 Developmental Physiology

Answer all questions

Time: Two hours

- 1) Write short notes on following;
 - a) Biosynthesis of IAA
 - b) Antigibberellins
 - c) Biosynthesis of Gibberlic acid.

(25 marks)

- 2) a) What is growth and how could growth be induced in a plant cell in terms of plant - water relations?
b) Illustrate the different growth patterns that you have studied for a plant and its different components.

(25 marks)

- 3) Interpret the following statements;
 - a) Short-day plants flower when the Pfr form exceeds the critical point.
 - b) Dormancy of seeds could be revoked by different modes.
 - c) Indole acetic acid (IAA) plays a role in parthenocarpic fruit development.
 - d) Ethylene is a fruit-ripening hormone.

(25 marks)

- 4) i) List all the soil-borne nutrients available for plants.
ii) At least for three of the essential macronutrients from (i), give the available forms of nutrients, their functions and effect of deficiency (if under deficit conditions).
iii) Compare hydroponics with soil culture.
v) Write on the conversion of Nitrate to Nitrite by nitrate reductase.

(25 marks)