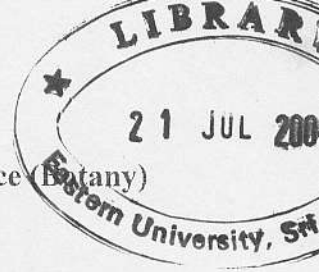


Eastern University, Sri Lanka



Third Year Second Semester Special Degree Examination in Science (Botany)

2001/2002 (March, 2004)

BT 403- Seed Physiology and Technology

Answer All Questions

Time: 03 hours

1. Describe the progressive development that takes place from pollination up to formation of a complete seed. (100 marks)
2. a) "Viability and vigour of a seed lot are a function of seed deterioration" Comment on this statement. (40 marks)
b) Describe the conditions that are required to maintain the viability of "Orthodox" and "Recalcitrant" seeds and give three examples in each seed type. (30 marks)
c) Differentiate between endospermic and non-endospermic seeds with suitable diagrams. (30 marks)
3. a) Explain what is meant by "Seed Dormancy" and give its practical importance. (40 marks)
b) Discuss the cause for different kinds of dormancy normally present in seeds. (60 marks)
4. Discuss the environmental factors that affect seed and seedling vigour during seed production. (100 marks)
5. Explain the following.
 - a) Principle of Topographical Tetrazolium Test in seed viability determination. (50 marks)
 - b) Effect of seed moisture and storage temperature on the deterioration of stored soybean Seeds. (50 marks)
6. Write short notes on
 - a) Normal and abnormal seedlings (30 marks)
 - b) Seed treatment (30marks)
 - c) Certified seeds and their benefits (40marks)