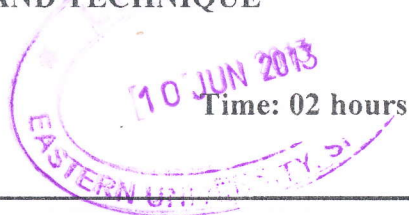


**EASTERN UNIVERSITY, SRI LANKA**  
**THIRD YEAR FIRST SEMESTER EXAMINATION IN**  
**AGRICULTURE 2010/2011 (Dec 2012 /Jan 2013)**  
**AGB 3102-CROP BREEDING AND TECHNIQUE**

Answer All questions



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- Q1. a. What are the essential requirements of a back cross programme? (40 marks)
- b. A cultivated variety of ground nut, possessing many desirable characters, is found to be susceptible to the leaf rust disease. It is decided by a breeder to incorporate rust resistance in this cultivated variety. Note that rust resistance is controlled by the recessive genes 'rr'. Describe the procedure to achieve this task. (60 marks).
- Q2. a. What is the concept of recurrent selection practiced in cross pollinated crops? (40 marks)
- b. Explain in detail a breeding method to increase oil content in maize (60 marks)
- Q3. Discuss the following
- a. Screening cowpea varieties against the pathogens causing collar rot disease (50 marks)
- b. Pattern of evolution of crop species. (50 marks)
- Q4. Write short notes on the following.
- a. Self incompatibility in crop plants (25 marks)
- b. Genetic and environmental variation (25 marks)
- c. Cytoplasmic male sterility and its utilization (25 marks)
- d. Characteristics of paddy varieties developed by mass selection (25 marks)