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EASTERN UNIVERSITY, SRI LANKA

FINAL EXAMINATION IN AGRICULTURE (500 SERIES)
2000/2001

ADVANCED PLANT BREEDING (ABI 412)

Answer All Questions

Time allowed: 03 hours

- 1)
 - a) Discuss the major aspects that are considered by a plant breeder to enhance biomass production in crops.
 - b) Explain the model relating the effects of biomass, partitioning and disease to the yield of genotypes.
- 2) Briefly discuss the following:
 - a) Stability of performance of crop cultivars.
 - b) Development of multiple hybrids and synthetics in cross-pollinated crops.
- 3)
 - a) Describe the characteristics of rice varieties suitable for the irrigated areas of Sri Lanka.
 - c) Briefly describe the new breeding strategy for rice improvement in Sri Lanka.
- 4) Explain the kinds of resistance that are considered in breeding for disease resistance and show how they are transferred in breeding programmes?
- 5) Write short notes on the following:
 - a) Acclimatization of crop cultivars.
 - b) Importance of genetic conservation.
 - c) Types of heterosis and their determination
 - d) Potential of somaclonal variants in rice improvement