

EASTERN UNIVERSITY, SRI LANKA

THIRD YEAR, FIRST SEMESTER EXAMINATION IN AGRICULTURE – 2016/2017

AB 3101: CROP IMPROVEMENT TECHNOLOGY

END SEMESTER EXAMINATION

Answer **all** questions.

This paper should be answered in **English**.

Time: **One hour**

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01. a) Give the steps in order that are involved in the development of hybrid varieties in maize (*Zea mays*). (50 Marks)
- b) A groundnut (*Arachis hypogaea*) cultivar with desirable agronomic characters is found highly susceptible (RR) to leaf rust disease. It is proposed to incorporate leaf rust resistance into this cultivar from a land race, in which leaf rust resistance is controlled by a pair of recessive genes 'rr'. Outline the breeding method to introduce leaf rust resistance to the groundnut cultivar. (50 Marks)
02. Write a brief account on the following;
- a) Acclimatization (20 Marks)
- b) Cytoplasmic male sterility and its maintenance (40 Marks)
- c) Marker assisted selection in plant breeding (40 Marks)

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