

FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI
SCHOOL OF AGRICULTURE AND AGRICULTURAL TECHNOLOGY
DEPARTMENT OF CROP SCIENCE AND TECHNOLOGY

Session: 2015/2016

Semester: Rain

CST 506: Crop Genetics and Breeding

Credit units: 2

Instructions: Answer any five (5) questions in all.

Time allowed: 3 hrs

Section A:

1. (a) Briefly describe the modes of reproduction prevalent in crop plants and (b) discuss their significance in plant breeding.
2. Write short notes on the following: (i) Apomixis, (ii) Gametogenesis, (iii) Anthesis, (iv) Parthenogenesis and (v) sporogenesis.

Section B:

- 3a). Describe how you can control *Cercospora* leaf spot disease of cassava as a plant breeder?
b). Write in details what you know on crop germplasm.
- 4a). Write short note on five (5) techniques you will use to store crop germplasm
b). For a gene bank to be successful in storing germplasm what are the necessary conditions

Section C:

- 5a). Briefly discuss "Pure line "selection method of Breeding and state the advantage and disadvantage of the method.
(b) What are the objectives of selection in breeding?
(c) State three (3) basic requirements for successful backcrossing.
- 6a). Briefly Describe five (5) steps that are involved in the maintenance of breeder's seed.
(b). Briefly explain five (5) constraints to seed marketing and distribution.