



NATIONAL OPEN UNIVERSITY OF NIGERIA
14/16, Ahmadu Bello Way, Victoria Island

SCHOOL OF SCIENCE AND TECHNOLOGY
OCTOBER, 2013 EXAMINATION

Course Code: ANP310

Course Unit: 2

Course Title: Genetics and Breeding.

TIME ALLOWED: 2 Hrs

INSTRUCTIONS:

- i. Answer FOUR questions in all
- ii. All questions attract equal marks

1. Write short note on any four (4) of the following cell components.

- a. Microbodies
- b. Mitochondria
- c. Plastids
- d. Vacuoles
- e. Nucleus

2a. What are the chemical components of the cell?

2b. Briefly discuss the functions of any four chemical constituent of the cell.

3a. What are nucleic acids?

3b. Briefly describe the structure of DNA and RNA.

4a. Define the term mitosis and meiosis.

4b. Why is mitosis important in cell division?

4c. Write a short note on cell division and cytokinesis?

5a. What are the basic laws of inheritance? Write a short note on one (1).

5b. Briefly explain the practical significance of the laws of Mendel.

6a. What is Mutation? Name the various types of Mutation.

6b. Give two limitations of mass selection method used in breeding self-pollinated plants.

6c. Explain the methods often used in breeding asexual propagated crops.