NATIONAL OPEN UNIVERSITY OF NIGERIA
14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS
SCHOOL OF SCIENCE AND TECHNOLOGY
MARCH/APRIL 2014 EXAMINATION

COURSE CODE: ANP310
COURSE TITLE: GENETICS AND BREEDING
TIME ALLOWED: 1 HOUR 30 MINUTES
INSTRUCTION:6 QUESTIONS ANSWER 4 (All question carries same mark)

1a. What is cell and state cell theory
1b.Write short note on any three of the following cell components.
1c. What are the cell membrane properties?

2a. Which component of the cell is referred to as the “Power house” of the cell and why?
2b. What are the function of inorganic salts? Give examples of five inorganic salts found in the cell.
2c. Briefly discuss Water as chemical component of cell wall.

3a. What is nucleic acid?
3b. Write a short note on types of RNA found in cells.
3c. What cell division?

4a. Define the term mitosis and meiosis. Where can one study meiosis in plants
4b. What is the significance of mitosis?
4c. Define the three basic laws of inheritance.

5a. Explain the following terms and give an example of each term.

I. LETHAL GENES
II. COMPLIMENTARY GENE
III. ADDITIVE GENES
IV. PLEIOTROPISM
V. Epistasis

5b. Define test cross, back cross and mutation

6a. Describe the different methods used in breeding self-pollinated plants?
6b. What are the aims of animal improvement programs?
6c. State the system of breeding in animal and why should inbreed be encourage in animal breeding?