



NATIONAL OPEN UNIVESITY OF NIGERIA

Faculty of Agricultural Sciences

Department of Animal Science and Fisheries

POP Examination Questions 2021_2

Course: ANP504: Biotechnology In Animal Production

Credit Unit: 2

Time Allowed: 2 hours.

INSTRUCTIONS: Answer question one (Compulsory: 25 Marks) and any other THREE (15 marks each)

QUESTION ONE

- i. What is single point analysis? 2 marks
- ii. Can you explain in your own word the constraints of single factor analysis 3 marks
- iii. What are the underlying linear phases DNA scientist uses to clone fragment of DNA? 10 marks
- iv. Can you write a brief outline on the concept of molecular cloning of DNA 10 marks

QUESTION TWO

Write short notes on the following in environmental biotechnology

- i. Biotransformation 5marks
- ii. Indirect selection of desired plant phenotype 10 marks

QUESTION THREE

- i. What differences exist between the relevant of Two Marker Approach (TMA) and Single Marker Approach (SMA)? 7 marks
- ii. Can you defend the notion that in vitro embryo production has greater merits than natural embryo production? 8 marks

QUESTION FOUR

- i. Outline the merits of composite interval mapping 4 marks
- ii. Can you distinguish between multiple intervals mapping and Inclusive composite interval mapping 11 marks

QUESTION FIVE

Can you write a short note in your own words the following concepts?

- i. Major applications of Environmental Biotechnology 4marks
- ii. Sex Sorted Semen 5 marks
- iii. Nuclear transfer or embryo cloning 6 marks

QUESTION SIX

- i. State in your own words the concept of DNA fingerprint 3marks
- ii. Outline important steps in DNA fingerprint 12marks