



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
*University Village, Nnamdi Azikiwe Expressway, Plot 91, Cadastral Zone, Jabi, Abuja*  
**Faculty of Agricultural Sciences**  
*POP Questions 2021\_1*

**Course Title: Animal Production Resources**

**Course Code: ANP 511**

**Credit Unit: 2**

**Total Score: 70 Marks**

**Time Allowed: 2 Hours**

**INSTRUCTION:**

**Answer Compulsory question 1 (30 marks) and any 2 questions (20 marks each)**

Question one

- a) State concisely how you would carry out different aspects of quality control in feedstuff (10marks)
- b) Explain four (4) basic Processing Methods for Roughage (8 marks)
- c) Outline four (4) advantages of Succulent feeds in animal nutrition (4 marks)
- d) Write short notes on the following
  - i. Feather and Hair Meals (5 marks)
  - ii. Nonprotein Nitrogen (NPN) (3marks)

Question two

- a) How would you identify animal proteins? (8 marks)
- b) What role does fishmeal as a protein source play in animal nutrition (7 marks)
- c) Explain the relevance of Single Cell Protein in animal nutrition. (5 marks)

Question three

- a) Explain the nutritional importance of fishmeal and state three (3) limitations to its usage in livestock feed (11 marks)
- b) What do you understand by molasses; state the relevance of this product in livestock feeding (9 marks)

Question four

- a) Mr Audu wants to use sunflower seed in formulating his livestock feed; what are the factors he should consider in incorporating such a product. (6 marks)
- b) How would you convince a farmer of the nutritional relevance of maize in his livestock feed. (9 marks)
- c) Give five (5) reasons why feed materials need to be processed (5 marks)