

AST 505: POULTRY AND RABBIT PRODUCTION. TIME ALLOWED: 3HRS.

INSTRUCTION: ANSWER FIVE QUESTIONS IN ALL, TWO EACH FROM SECTION A AND B, AND ONE FROM SECTION C.

SECTION A:

- 1a. Discuss the current state of the Poultry industry in Nigeria.
- 1b. List the secondary sexual characteristics in the cock and hen.

- 2a. Give a concise description of the process of egg formation (Diagram essential).
- 2b. With the aid of a diagram only, describe the internal features of a domestic fowl's egg and yolk.

- 3a. With the aid of a diagram ONLY, show the internal appearance of
 - i. Fertile
 - ii. Infertile egg candled on the 3rd – 7th day of incubation.
- 3bi. List and describe five management operations in poultry production.
- 3bii. What are the causes of low fertility in a breeder farm?

SECTION B

- 4a. List 5 qualities of a good feedstuff or ingredient.
- 4b. Formulate feed for poultry; a grower mash using conventional ingredients that will contain 2,475 ME Kcal/kg and 16% Crude protein (CP).
- 4c. Ascribe price per Kg arbitrarily to the ingredients and calculate the price per kg of the said feed.

- 5a. Describe briefly the commercial poultry breeding and selection of grand parent birds.
- 5b. Prepare a premix for broiler finisher to be added to the diet at the rate of 1.5kg per ton.

The following information was given:

Source of Vit./Mineral	Requirement/Kg	Concentration in Source
Fe (FeSO ₄ .7H ₂ O)	100mg	25%
Cu (CuSO ₄ .5H ₂ O)	10mg	30%
Vit. A (Vit. A acetate)	2,000 IU	400,000 IU/g
Riboflavin	4mg	0.75g/g
Thiamin	2mg	Pure

- 5c. List the two important components of premix.

- 6a. Prepare a program using computer software in formulating a layer's mash to contain 2,500ME Kcal/kg (Energy level), 16% CP (Protein level), 3.5% for calcium, 0.45% for phosphorus and least cost price per kg of feed. Use conventional ingredients as the constraints.
- 6b. Enumerate the advantages of using computer software to formulate feed.
- 6c. Compare and contrast the small scale with the commercial scale of management and production of rabbits.

SECTION C

7. Write short notes on any three (3) of the following breeds of ducks:
 - a. Khaki Campbell
 - b. Pekin
 - c. Aylesbury
 - d. Indian Runner
 - e. Buff Orpington.

8. Discuss Turkey management under the following headings
 - i. Brooding
 - ii. Grower phase
 - iii. Finishing phase.

FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI
DEPARTMENT OF ANIMAL SCIENCE AND TECHNOLOGY
2008/2009 HARMATTAN SEMESTER EXAMINATIONS

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INSTRUCTION: ANSWER THE TOTAL OF FIVE QUESTIONS. THIS MUST INCLUDE AT LEAST ONE QUESTION FROM EACH SECTION

TIME ALLOWED: 3HRS

SECTION A

- 1a. Draw a flow chart showing the relationships between the different segments of the poultry industry
- b. Describe ways of improving the poultry industry in Nigeria.

2a. A farmer managed a flock of breeder stock comprising 1000 hens and 100 cocks. On the average, 5600 eggs were collected per week, and after the first candling at the 5th day of incubation, 1,120 eggs were discarded as infertile. Calculate the following

- i. Sex ratio of the breeders
- ii. Daily laying rate
- iii. Percent fertility
- iv. Number of day old chicks produced
- v. Percent hatch.

Note: Hatchability = 90%.

- b. Briefly describe the health maintenance program for broiler production.

SECTION B

3a. Formulate a 50kg chicks mash using conventional ingredients that will contain 2,640 ME Kcal/Kg and 20% CP of energy and protein levels respectively.

- b. Assuming price per kg of ingredients, determine the cost price per bag.

4a. Using computer software write a program for growers' mash from conventional ingredients that will satisfy demand for energy and protein levels of 2,475 ME Kcal/kg and 16% CP. Also, write for 1% calcium, 0.35% phosphorus, 0.80% lysine and 0.27% methionine inclusion levels.

- b. Prepare a mineral-vitamin premix for broiler finisher to be added to the diet at the rate of 2kg per ton using wheat offal as a carrier. The following information was given.

Source of Mineral-Vitamin	Requirement per Kg	Concentration in source
Fe (FeSO ₄ . 7H ₂ O)	100mg	20%
Cu (CuSO ₄ . 5H ₂ O)	10mg	25%
Vitamin A (Vitamin A acetate)	2000IU	325,000IU/g
Riboflavin	4.0mg	0.5g/g

Thiamin	2.0mg	pure
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SECTION C

5a. Turkey meat contains high protein and low fat and therefore high feeding value. Discuss.

b. An Animal Nutritionist recommends 13.0KJ/g ME for ducks in the starter phase and 12.0KJ/g ME for laying ducks.

- i. Why did he reduce the ME value for laying ducks.
- ii. Convert these ME values from KJ/g to Kcal/g.

c. Characterize the main breed of geese.

6a. A farmer intend to raise birds for meat. He has the option of raising guinea fowl with a weight of 1.5kg in 14weeks and turkey with a weight of 6kg in 14weeks. Which of these birds will you advise the farmer to raise? Advance credible reasons for your choice.

b. Why are ducks considered wasteful feeders and how would you improve their utilization of feed?

c. What management practice(s) would you introduce to curb the menace of-

- i. Cannibalism
- ii. Flight in a guinea fowl farm?

SECTION D

7a. Make a labeled diagram of the gastro-intestinal tract of rabbits and discuss extensively the contribution of the various segments to digestion of protein, carbohydrates and fats.

b. Differentiate between pseudo-pregnancy and pregnancy in rabbit production.

8a. With the aid of labeled diagram, describe the various parts of doe reproductive system. Indicate the significance of each part.

b. Briefly explain the following with regards to rabbit production

- i. Colostrum
- ii. Pseudo-rumination
- iii. Mating and force mating.
- iv. Kindling.
- v. Weaning.