

Mansoura University
Faculty of Agriculture
Department of Poultry Production
Course Title: Poultry Nutrition
Course Code: Pol 306
Full Assessment: 60 Marks



Academic Year: 2012/2013
Semester: Second Term
Exam Type: Final (Written)
Level & Program Studied: 3rd (APF)
Exam Date: 25 May, 2013
Exam Time: Two Hours

(The exam is composed of 6 pages)

Answer all the following questions:

First Question: (20 Marks)

Part A (10 Marks, evenly distributed):

State whether of following sentences are false (×) or true (√):

- () Essential vitamins for poultry are thirteen.
- () Cystine is a precursor for biosynthesis of methionine.
- () Feed intake of poultry increases under heat stress conditions.
- () Feeding high protein diets for poultry decreases their water intake.
- () Water-soluble, non-starch polysaccharides can be digested by poultry.
- () All amino acids are biologically and physiologically essential for poultry.
- () Ca and P are the principal components of bones (skeleton) and egg shells.
- () Chickens are able to survive much longer without water than without feed.
- () Carbohydrates can be used for the biosynthesis of fatty acids and some amino acids.
- () Feeding nutrient-deficient or imbalanced diets positively affect productivity of poultry.

Part B (10 Marks, evenly distributed):

Give the scientific terms corresponding to these definitions:

1. The building blocks of proteins.
2. The essential fatty acid for poultry.
3. The inorganic constituents of feeds and body tissues.
4. Simple sugars that include hexoses and pentoses.
5. The amount of feed required to produce the unit weight of product (meat or eggs).
6. Chemical substances used by an animal for growth and development of its cells, organs, and tissues.
7. The minimum of energy expended in fasting, resting animal under optimal environmental conditions.
8. Organic compounds required in minute amounts for normal growth, production, reproduction, and health.
9. Amino acids that cannot be synthesized by animals in sufficient quantity to meet their nutritive requirement and therefore must be supplied in the diet.
10. A polymer of glucose that cannot be digested by poultry because they do not possess its hydrolyzing enzyme in their digestive tracts.

The answer for the part B of the first question:

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

Second Question: (20 Marks, evenly distributed)

Underline the correct answer in brackets to complete the following sentences.

1. The disaccharides of major importance in the nutrition of the chickens are
(Sucrose and maltose / Glucose and fructose / Galactose and mannose).
2. is a common chamber into which the digestive, urinary and reproductive tracts open.
(Cloaca / Small intestine / Oviduct).
3. is the process by which the food is broken down into absorbable nutrients.
(Absorption / adsorption / digestion).
4. Fish meal, meat meal, blood meal and feather meal are some examples of (Plant proteins / Animal proteins / Pure proteins).
5. are finger-like projections along the small intestinal wall which increase its surface area for greater absorption. (Villi / Microvilli / Brush border).
6. Ground limestone, ground oyster shell, steamed bone meal and dicalcium phosphate are some examples of (Minerals / Antioxidants / Methyl donors).
7. The requirements for major minerals are usually expressed as (mg/kg / % of diet / ppm).
8. Percent of non-phytate P present in plant feed ingredients is about (100% / 66% / 33%).
9. Minerals required in small amounts by the bird are called (Macro-minerals / Micro-minerals / Pollutants).
10. are muscular contractions that move food throughout the gastrointestinal tract.
(Peristalsis / Pinocytosis / Perosis).
11. is a negative interaction between a nutrient and other nutrients or between nutrients and non-nutrients. (Synergism / Antagonism / Catabolism).
12. The provision, to cells and organism, of the materials necessary to support life is known as
(Nutrients / Nutrition / Vitamins).
13. are important components of nucleic acids (Fats / Proteins / Ribose and deoxyribose).
14. The true stomach of the bird is termed (Proventriculus / Ventriculus / Gizzard).
15. The measure of the solidification temperature of fat is termed (Tallow / Grease / Titer).
16. Animal fats are rich in (Saturated fatty acids / Unsaturated fatty acids / Ergosterol).
17. Yellow corn, barley, wheat and oats grains and their by-products are major sources of in poultry diets. (Minerals / Vitamins / Carbohydrates).
18. represents on average 73% of the water required by the bird. (Metabolic water / Drinking water / Moisture present in feed ingredients).
19. are polymers of two to ten simple monosaccharides. (Polysaccharides / Disaccharides / Oligosaccharides).
20. are amino acids that can only be synthesized by the animal when its feed contains a surplus of their precursors. (Essential amino acids / Non-essential amino acids / Semi-essential amino acids).

Answer only two of the following questions:

- The answer for the third question:**

[illegible]

[illegible]

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This image shows a full page of white paper with horizontal dotted lines, typical of primary school writing paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Examiners:

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