Quiz #1
AVS 305
September 9, 1998

1. In general, are leaves or stems of a plant more nutritious? (1 point) Why? (2 points)
   Leaves are more nutritious because they are made up of less structural carbohydrates than stems and also have more protein than stems.

2. What 2 components are the major nutrients in plants? (2 points)
   Carbohydrates and proteins are major nutrients in plants.

3. Animal feeds that are low in energy content and high in fiber are generally called what? Give an example. (2 points)
   Forages or roughages
   Grass (alfalfa)

4. What is crude protein and how is it determined? (4 points)
   Crude protein is the amount of protein (amino acids) found in a feed, using the Kjeldahl reaction by putting the dry matter in 36 N sulfuric acid and then in 12 N sodium hydroxide and then titrating it. It is possible to find nitrogen content. Taking N times 6.25 gives the crude protein percentage.
   Ash is composed of vitamins and minerals (some may be gone by the intense heat used to create ash). Meat.

5. What is ash? (2 points)
   Ash is composed of minerals and vitamins (some may be gone by the intense heat used to create ash).

6. State two ways in which processing can improve the nutritive value of feeds. (2 points)
   1. It increases the digestion or quantity consumed
   2. It detoxifies feed (soybeans)

7. What is the major factor influencing voluntary feed intake in ruminants fed fibrous, low energy diets? (2 points)
   Gut fill is the major factor

8. If fed the same diet, would a non-lactating or lactating animal consume more? (2 points) Why? (2 points)
   A lactating animal would consume more because of a greater need for both the nutrients and water found in that feed. This need is derived from the need for energy to make milk and the need for more nutrients to place in that milk. Otherwise negative energy balance occurs.

9. A growing foal is synthesizing 700 g/d of protein, 600 g/d of which is being simultaneously degraded. What is its daily rate of protein deposition? (2 points) What is this an example of? (2 points)
   The daily rate of protein deposition is 100 g/d and this is an example of positive energy balance.

   Pref: Vet 00
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