**Animal Nutrition Review**

Exercise 1: Matching  Write the letter of the compound on the right in front of the matching description on the left. All compounds are used only one time and they are all used.

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>An essential fatty acid</td>
<td>A.</td>
</tr>
<tr>
<td>2</td>
<td>A precursor to Vitamin A</td>
<td>B.</td>
</tr>
<tr>
<td>3</td>
<td>An amino acid not found in beans</td>
<td>C.</td>
</tr>
<tr>
<td>4</td>
<td>A combination of chewed food and digestive enzymes</td>
<td>D.</td>
</tr>
<tr>
<td>5</td>
<td>A hormone produced by the stomach which we recognize as “hunger”</td>
<td>E.</td>
</tr>
<tr>
<td>6</td>
<td>A pancreatic hormone that acts on the liver</td>
<td>F.</td>
</tr>
<tr>
<td>7</td>
<td>A stomach hormone which stimulates the production of gastric juices</td>
<td>G.</td>
</tr>
<tr>
<td>8</td>
<td>A substance produced by the liver</td>
<td>H.</td>
</tr>
<tr>
<td>9</td>
<td>A hormone produced by adipocytes (fat cytes) that decreases appetite</td>
<td>I.</td>
</tr>
<tr>
<td>10</td>
<td>A digestive enzyme that breaks down proteins</td>
<td>J.</td>
</tr>
<tr>
<td>11</td>
<td>A water soluble vitamin, the deficiency of which leads to anemia</td>
<td>K.</td>
</tr>
<tr>
<td>12</td>
<td>A hormone produced by the small intestine</td>
<td>L.</td>
</tr>
<tr>
<td>13</td>
<td>A digestive enzyme that breaks down carbohydrates</td>
<td>M.</td>
</tr>
<tr>
<td>14</td>
<td>An amino acid not found in corn</td>
<td>N.</td>
</tr>
<tr>
<td>15</td>
<td>A pancreatic digestive enzyme that breaks down proteins</td>
<td>O.</td>
</tr>
</tbody>
</table>
Exercise 2:

Animal Nutrition Review

[Crossword puzzle image]
Animal Nutrition Clues:
Across
1. the inactive form of a protease enzyme manufactured by chief cells in the stomach
5. the organ which produces most digestive enzymes as well as both insulin and glucagon
8. the portion of the alimentary canal connecting the pharynx with the stomach
10. an organism with an exceptionally long digestive system, a cecum, and many grinding teeth (molars)
15. the type of amino acid that, by its presence, defines a protein as complete or incomplete
19. a condition in which an organism obtains enough calories but not enough essential nutrients to be healthy
20. a nutrient that an organism cannot make from raw materials; these must be ingested
23. the organ that releases glucose as a response to glucagon
24. the final step in food processing in mammals
25. the storage organ for bile
26. the third step in the processing of food in mammals

Down
1. the cavity immediately anterior to the
2. a flap which covers the entrance to the trachea and directs food down the esophagus
3. the location in the alimentary canal where most of the reabsorption of water occurs
4. a portion of the digestive system
6. a complete digestive tube in some animals that begins at the mouth and ends at the anus (2 words)
7. an epidemic problem in America defined as the intake of too many calories
8. digestion that occurs outside of the cell such as by fungal hyphae
9. the enzyme released in the oral cavity which begins the chemical digestion of carbohydrates
11. a ball of lubricated chewed food at the anterior end of the digestive system
12. the first portion of the small intestine in which most of the absorption of food monomers occur
13. an animal which eats other animals
14. the rhythmic contractions that propel a bolus of food through the alimentary canal.
16. a muscular ring that regulates the movement of a bolus of food
17. an inorganic substance that often acts as a cofactor in enzymes
18. an organic molecule that typically acts as a coenzyme in reactions
21. a single structure that increases the absorptive surface area in the small intestine
22. a chemical in the digestive system which emulsifies fat when added to the small intestine
Suggested Answers:

Exercise 2

PEPSINOGEN
H A P G O
R P G O
H A P G O
L L

HERBIVORE
O O
X N M M

ESOPHAGUS
L E N D N

AUTER
A S O A

STANDARD
P R S L I N C

MALNOURISHMENT
I N T E A R N A

CALCANEAL ESSENTIAL
M E I A

LIVER
E L I S

ELIMINATION
L

GALLBLADDER