**EXERCISES AND QUESTIONS ABOUT LIVING ORGANISMS**

**1.- Read each set of facts, or clues, then draw your conclusions:**

I am found in plants. I contain chlorophyll that plants use to make their own food. What am I?:

I am the basic unit of life. I am found in plants and in animals. What am I?:

I am a single-celled organism. I do not have a nucleus. I cause deseases in plants and animals. What am I?:

I am formed of many similar cells that have the same job or function. I form organs. What am I?:

I am a cell. I contain one nucleus, some mitocondria, many ribosomes, a Golgi body, two endoplasmic reticula, some lysososmes and a small vacuole. What am I?:

**2.- The following figures represent a eukaryotic cell and a prokaryotic cell. Indicate which type of cell each figure represent.**

List 3 features (characteristics) that formed the basis for your identification of these cells:

1.-…………………………………………………………………………………………

2.-…………………………………………………………………………………………

3.-…………………………………………………………………………………………

**3.- Fill in the names of the seven levels of organization in Linnaeu’s system of classifying organisms, with a representin the smallest category and g the largest category.**

 a:

 b:

 c:

 d:

 e:

 f:

 g:

Provide a specific example for the level represented by g:………………………

Provide a specific example for the levels a and b:…………………………………

**4.-Use the figure to answer the following questions:**

The phylogenetic tree shown below indicates the evolutionary relationships for a hypothetical group of modern organisms, labeled 1 – 5, and their ancestors, labeled A –E.

a.-Which two modern organisms are likely to be most closely related?:………

b.- What was the most recent common ancestor of organisms 2 and 3?:………

c.- What was the most recent common ancestor of organisms 1 and 5?:………

**5.- The diagram below shows a Petri dish containing a bacterial culture and 4 paper disks (A,B,C,D) treated with different antibiotics. The concentration of all 4 antibiotics are the same. Dark areas on the dish indicate bacterial growth, and clear areas indicate inhibition of bacterial growth. State wether the bacteria in this culture are very sensitive, moderately sensitive, or insensitive to each antibiotic and explain your reasoning.**

A:……………………………………………………………………………………….

………………………………………………………………………………………….

B:……………………………………………………………………………………….

………………………………………………………………………………………….

C:……………………………………………………………………………………….

………………………………………………………………………………………….

D:……………………………………………………………………………………….

………………………………………………………………………………………….

**6.- Why are there no free-living protozoa in environments that ate dry year-round?**

**7.- Use the food pyramid below to answer the following questions:**

a.- Based on the organization of the pyramid, which food group does the body need and use the most? What is the nutrient in this group?::…………..

……………………………………………………………………………………………

b.- Which food group contains all the essential amino acids? Is this the only group that contains essential amino acids? Explain your answer:……………..