Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ APES

Due Date: \_\_\_\_\_\_\_\_\_ Mrs. Pefanis

**Free Response Question**

**Unit 5 (Chapters 10 & 11)**

**Directions:** Choose one out of the following two questions to answer. You may use the textbook or the internet for assistance. Please work on this activity individually! This is NOT a group activity and your answers should not be the same as someone else’s answers. This assignment will be handed in and graded using an AP rubric. Write your answer to each part clearly. Support your answers with relevant information and examples. Where calculations are required, show your work.

**1.** When the western states were initially settled, large tracts of land were deemed unusable for agriculture. This land was never claimed by individual settlers, and remained under the control of the federal government, which has enacted many laws to protect it. However, some ranchers would like to eliminate these laws, and freely use the land for grazing and recreational purposes. Over time, this battle between the government and ranchers has become known as the Sagebrush Rebellion, named after the fragrant sagebrush that is common of western grazing areas.

1. What is the tragedy of the commons, and what is the name of the 1930 act designed to prevent overgrazing on federal lands? (3 points)
2. Name two of the four federal agencies responsible for managing public land. (1 point)
3. Over time, much of the unclaimed land has been turned into a combination of wildlife refuges, national parks, and rangelands. Describe the difference in designated use of each of these land categories. (3 points)
4. Suppose ranchers are given free access to government-controlled rangelands. Create a graph that shows cattle population size over time under two conditions – unrestricted grazing with no communal regulation (tragedy of the commons), and communal regulation through limited grazing. Write a caption to your graph that explains what it shows. (3 points)

**2.**  Between 1950 and 2000, global meat production increased from 52 billion kilograms to 240 billion kilograms. During this period, the global human population increased from 2.6 billion to 6.0 billion.

1. Calculate the per capita meat production in 1950 and in 2000. (2 points)
2. Use the values from part (a) to calculate the change in global per capita meat production during this 50-year period as a percentage of the 1950 value. (2 points)
3. Discuss why it is more efficient to produce grain for human consumption than to produce meat for human consumption. In your answer, consider both land use and energy use. (2 points)
4. Describe TWO environmental consequences of the increase in the production of meat for human consumption. (2 points)
5. Identify and explain one potential advantage and one potential disadvantage for human health of a diet that contains very little meat. (2 points)

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Essay # Chosen: \_\_\_\_\_\_\_\_

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**Attached additional pages as needed**