**BY 115 Introduction to Environmental Sustainability**

**Spring 2018 – Clarkson University**

**Exam 4 – Take Home Final Exam (100 pts)**

**Due Friday May 4 @ 4:00 pm – Please use Moodle**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**1. Describe how the Incans, Mayans, and Vikings each responded and adapted to their changing climate. How do people today respond and adapt to climate change? Provide three examples of these adaptations. (10)**

**2. Explain the following figures. Answer the following questions about these images (20).**

*a) What geographical location of the data?*

*b) Explain what the colors represent in each of the panel. Two years of data is being presented (2 panels for each year) Be sure to explain the upper and lower panel for each year.*

*c) What is an anomaly? Why do we use temperature anomalies to evaluate changes in climate?*

*d) What do the anomalies for 1998 and 1999 suggest about these years?*

**1998**

**1999**

**3. What are the impacts of El Niño Southern Oscillation (ENSO) and its counterpart La Niña, around the world? Describe climate impacts at three locations around the world. (10)**

**4. Critical Thinking: How did the El Nino/La Nina module impact your understanding of climate change? (10)**

**5. Explain what the following figure represents. Be sure to interpret what all axes and data points mean. (10)**

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**6. Explain positive and negative feedback in the context of climate change. (10)**

**7. What is albedo? How is it related to and affected by climate change? (10)**

**8. Find one journal article that discusses the Greenland Ice Sheet. Summarize this article, including the objectives and major findings. (20)**