

ENRG3310: Introduction to Energy and Sustainability

Prof. Ognjen Š. Miljanić

Midterm I

February 14, 2017

Name: _____

Last

First

Student ID Number: _____

Read directions very carefully. Write your answer legibly in the designated spaces. *Total number of points is 200.*

1. Give an example of an action that expends (a) 1 Joule of energy, (b) 3,000 Joules of energy, (c) 1 kWh of energy, and (d) 500 kWh of energy. Support your answers with simple calculations.

40 points

2. Estimate daily energy consumption (in kWh) of a small two-person office at UH. You will need to look up power ratings of typical appliances, estimate which appliances are present and how long are they typically running per day. Ignore air-conditioning for the time being.

40 points

3. What countries were the three biggest consumers of oil (in absolute terms) in 1970 and 2015? Calculate their per capita productions in those specific years? Cite your sources. *30 points*

4. What is YOUR most current one-sentence definition of sustainability?

10 points

5. Using data from the BP Statistical Review of World Energy, sketch a rough plot of China and US's coal consumption changes between 1965 and 2015. Then do the same for natural gas.

30 points

GROUP PROJECT PROPOSAL

Turn this in separately.

50 points