

## Study guide for 351

### 2<sup>nd</sup> test

1. Describe the various strategies for reducing fuel consumption of automobiles. Select one and discuss in detail.
2. Discuss various modes of transportation in terms of their efficiency for carrying goods, and for their potential in reducing overall energy consumption.
3. Discuss various strategies for efficiently integrating wind energy into the power grid.
4. Calculate the economics of various solar/wind schemes, keeping in mind the need for storage, if any. Net present value calculations.
5. Calculate the weight of batteries(or natural gas tanks) needed for a given miles of travel by car, given the efficiency chart for cars. Calculate the economics, given the cost tables for various technologies. NPV calculations.
6. Discuss the pros and cons of various types of biofuels. What are the newer technologies for biofuels?
7. Discuss various forms of geothermal energy in some detail
8. Discuss the electric grid system-present and future