UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE AND ENGINEERING
FINAL EXAMINATION, APRIL 2001
EDM 304 – PREVENTIVE ENGINEERING AND SOCIAL DEVELOPMENT
EXAM TYPE: No aids permitted.
Examiner - N. Khan

Instructions

You must answer four questions, all of equal value. Please answer Questions 1 and 2 in a first examination booklet, and questions 3 and 4 or 5 in a second examination booklet.

PART A:

1. Several "impotence" principles have been discussed in this course. Define two such principles and explain why they pose problems for conventional engineering and economic approaches to materials and production.

2. Energy has conventionally been viewed as a commodity. Why is this view deficient? Explain how other views of energy may help develop preventive approaches.

3. Imagine that you are the Chief Executive Officer (CEO) of a firm manufacturing motor vehicles. Outline three strategies you would employ to make work healthier in your firm while still maintaining productivity and profitability.

PART B: You must answer either question 4 or question 5.

4. Discuss three ways in which the metabolism of our cities may be made circular. Be specific with regard to the strategies you discuss.

5. Explain in detail the most important engineering preventive strategy you have learned in this course from the point of view of your area of specialization. How do you expect to implement this strategy when you become a working engineer?