



Aalto University School of Chemical Technology

Puu-0.3320 Environmental Responsibility and Management Systems in
Industry 8 cr, Roope Husgafvel

2nd Exam 18.05.2015

Please answer all questions from Part A and three (3) questions from Part B.

Important! If you want to do the entire course in this exam please answer all questions from Part A, three (3) questions from Part B, two (2) questions from Part C and three (3) questions from Part D.

Part A – Explain (briefly) the meaning of the following terms: (2p each. 10p total.)

- 1) Screening (one process step in EIA)
- 2) Scoping (one process step in SEA)
- 3) Assessment (one process step in SEA)
- 4) Sustainability life cycle assessment (SLCA)
- 5) Backcasting

Part B – Answer THREE (3) questions. All questions are worth 5p.

- 1) Explain the difference between an Environmental Impact Assessment (EIA) and a Strategic Environmental Assessment (SEA). (lecture by Gerard Brady) 5p.
- 2) Describe and explain the main features and key steps of a typical Environmental Impact Assessment (EIA) process in Finland. (lecture by Gerard Brady) 5p.
- 3) Describe and discuss the seven fronts of the Mount Sustainability. (lecture by Celia Peterson) 5p.
- 4) Describe and discuss the main elements of the Framework for Strategic Sustainable Development. (lecture by Celia Peterson) 5p.

Part C – Prof. Ilkka Savolainen's lectures.

Answer TWO (2) questions. All questions are worth 5p.

- 1) Describe the main stages of the formation of tropospheric ozone
- 2) Describe the concept of radiative forcing
- 3) Discuss carbon cycle and CO₂ emissions
- 4) Discuss the differences between adaptation to climate change and mitigation of climate change
- 5) What are the main features stratospheric ozone depletion?



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Part D – (other lectures)

Answer THREE (3) questions. All questions are worth 5p.

- 1) Describe and explain the UPM approach to environmental management and responsibility? (lecture by Päivi Rissanen) 5p.
- 2) Describe the principles of life cycle assessment and explain how it can be used to measure environmental performance and impacts of process industry. (lecture by Lauri Linkosalmi) 5p.
- 3) Describe and discuss the comprehensive perspective on industrial environmental management and control. (lecture by Mikko Martikka) 5p.
- 4) Ecodesign – describe its main phases/steps and explain its key benefits for process industry? (lecture by Jutta Nuortila-Jokinen) 5p.
- 5) Sustainability in the process industry – why and how to measure it? (lecture by Nani Pajunen) 5p.