Student name:	
Student number:	

EXAM Advanced Requirements Engineering (ARE)

January 28th, 2011, 15.15-17.15

Instructions (please read carefully):

- *This is a closed book exam – it is not allowed to consult any material – physical or electronic. Be sure to switch mobile phones off and store them in a closed bag.*
- ***Use this exam to write the answers on questions. Use the available boxes after each question for your answer. Do not write outside the boxes***
- ***Be sure to indicate name and student number on each sheet of paper.***
- *Concise yet complete answers are better than long-winded answers.*
- *You may answer in English on in Dutch.*
- *Grade for this exam is Round (Sumof Points / 10).*
- *Grade for the ARE course is 0.7* this exam + 0.3 * group assignments. On TIS, you will be reported the* final *grade for the ARE course.*
- *This exam has six pages.*

Success!

Group assignment

Before starting with the exam, please indicate below whether you did your group assignments.

Yes/No	I did my assignments in the year 2011
Yes/No	I did my assignments in the year 2010

Question 1 Requirements Engineering (34 points)

a) Two distinct perspectives can be taken on modern Requirements Engineering. Mention these two perspectives and explain them briefly (11 points).

Perspective 1:

Perspective 2:

b) The Engineering cycle makes a distinction between evaluation and validation. Discuss the difference between evaluation and validation (11 points).

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Evaluation is …

Validation is …

c) In the paper of Akkermans and Gordijn ("What is this Science called Requirements Engineering?"), various forms of validation are introduced. Usually, these forms of validation are applied to requirements engineering *research*, but they can equally well be applied to requirements engineering *as done by consultants for a real-life company*. Now, suppose that you have been asked to *assess the validity* of the requirements report of the consultants. Explain then what the following forms of validity mean, in terms of validity of the report of the consultants. (12 points)?

Theoretical validity:

External validity:

Question 2 Problem Frames (33 points)

a) Problem context diagrams can include various types of domains. What are the domains for the diagram below? Mention also their type. (11 points)

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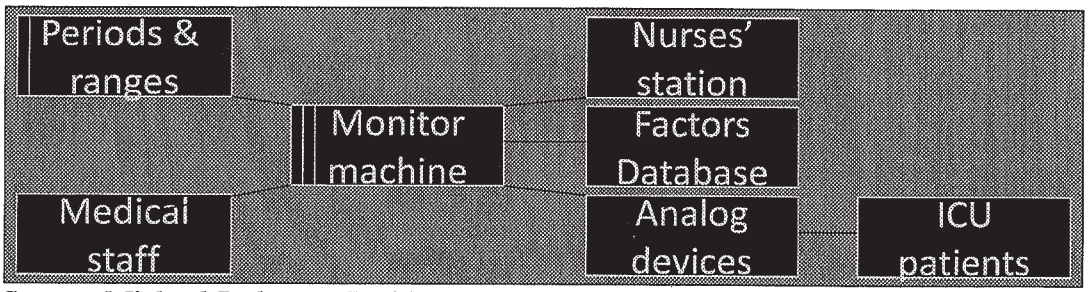

Source: Michael Jackson – Problem Frames (2001)

b) Argue in which situation(s) the Factors database can be included in the Monitor Machine, and in which situation(s) not. (11 points)

c) To decompose problems into smaller problems, argue why functional decomposition is not a good approach. (11 points)

Student name:	
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Question 3 Goal Modeling (33 points)

a) Multiple other goal modeling approaches other than *i** exist. Mention two of such approaches and describe them briefly. (11 points)

b) The *i** approach comes with two models. Which two models are that, and describe them briefly. (11 point)

Model 1: …

Model 2: …

c) There are also drawbacks as it comes to using *i**. Mention at least three drawbacks, and explain them briefly. (11 points)

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