

Illustrations and Answers for TDT4252 exam, June 2012

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1. Enterprise Architecture

- 1a. main role of an Enterprise Architecture:
 - to bridge the business strategy and IT strategy of an enterprise.
- 1b. Name two things that a good Enterprise Architecture methodology should include:
 - A methodology (e.g. ADM in TOGAF) – to provide guidance during the process.
 - Resource base such as reference models – to build on previous knowledge.
- 1c. Comparing 2 EA methodologies:
 - Reference article A16 by Roger Sessions, that describe and compare the architectures.
 - An example of such a comparison could be between Zachman Framework and TOGAF where TOGAF has a good methodology, but Zachman does not, while the taxonomy that Zachman provides is very extensive and this is not the case with TOGAF. (Note this section of the answer requires more discussion around the two points identified in 1b.)

Question 2

- 2a. Difference between Enterprise modelling and modelling in the IT domain:
 - IT modelling is to design IT systems whereas Enterprise modelling is about understanding enterprises. Enterprise models show aspects other than IT systems within an enterprise such as the organisation structure, enterprise goals, etc.

Question 2

- 2b. Advantages of Enterprise Modelling.

Examples:

- To build a common enterprise culture and shared vision to be communicated through the enterprise via the model, used as a common language.
- To capitalise enterprise knowledge and know-how to build an enterprise memory, which becomes a part of the enterprise assets.
- To support decision making concerning enterprise improvement or control.

Ref: Vernadat

Question 2

- 2c. Example of a model – here is the clue is to model to support **reuse of product modules**. The concepts to model should include:
 - Processes (relations: what processes deliver which products)
 - Products (relations: to processes, may be requirements /or constrains on the design).
 - Organisation structure (relations: to process, product, poeple)
 - People, perhaps competences or skills of people. (relations: what skills a person has, which process they work on, organisational structure).
- The above concepts prvide the basis for a model/diagram as required by the exam.

Question 3: *Intentional Actors*

3a.



Modelling
Practitioner

Responsible for



Quality of
Modelling
Process

Reasonable
method use

Model Quality



Domain
expert

Responsible for



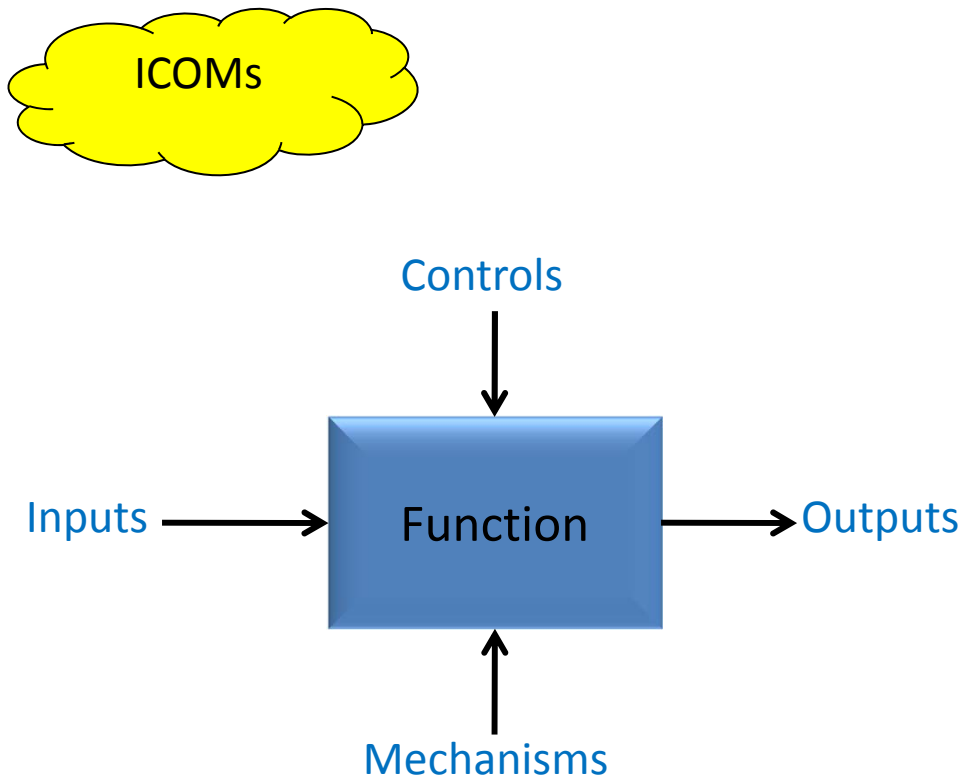
Correct and
relevant
knowledge
content

Question 3: *Intentional Actors*

3b – some hints to create the model

- Goal dependency:
 - Domain expert: An enterprise model
- Task dependency:
 - Domain expert: create an enterprise model
 - Enterprise modeller: receives information from the domain expert (to create the model)
- Resource dependency:
 - Domain expert: modelling expertise
 - Enterprise modeller: Access to information, knowledge

Question 4a & 4b. IDEF0



- **Inputs**: items that trigger or are transformed in the activity. E.g. the raw materials in a production process.
- **Controls**: guide or something that regulate the activity. E.g. requirements or constraints. Note that these do not change during the process.
- **Mechanisms**: resources used to perform the activity. E.g. IT support or people. These can be consumed, but they don't necessarily get transformed to output.

Question 5

- 5a: "...the main sets of concepts to model and build an enterprise" –
 - Here you need to think what you consider as the main concepts, which can be from the reference architectures. You should use the hint that is provided at the end of the questions and relate it to the model created by you in answering question 2. e.g. the main concepts include:
 - Organisation, processes and products.
- Note: Any one of the Enterprise reference Architectures could have been used to answer this question. May be the easiest may have been CIMOSA, PERA or GERA. Since the question later refers to GERA/GERAM, it may have been easiest to stick to that.

Question 5b

- a) **Human oriented concepts**
 - to describe the role of humans as an integral part of the organisation and operation of an enterprise.
 - to support humans during enterprise design, construction and change.
 - E.g. the concepts people, skills are the human-oriented aspects in your model in question 2.
- b) **Process oriented concepts** for the description of the business processes of the enterprise;
 - E.g. The concept process is the process-oriented aspect in your model in question 2.
- c) **Technology oriented concepts** for the description of the business process supporting technology involved in both enterprise operation and enterprise engineering efforts (modelling and model use support).
 - E.g. The concept "application" or "supporting technologies" could have been included in your model in question 2 and these would have been the technology-oriented aspects.