Outline exam format

Question 1 (40% - compulsory 20 marks)
Basic EM principles cf. construal comprehension exercise

Question 2 (30% - optional 15 marks)
Construals vs programs: states and behaviours
Question 3 (30% - optional 15 marks)
Constructivism and Constructionism: making construals
Question 4 (30% - optional 15 marks)
Software development from an EM perspective
Question 5 (30% - optional 15 marks)
The Abstract Definitive Machine: overview and applications

Question 1
Basic EM concepts and principles
cf. construal comprehension exercise

Some relevant topics for revision:

- Construal, referent, context, understanding
- Observables, dependencies, agency
- Definitive scripts + definitive notations (EDEN)
- The Nim construal as embedded in the EMPE as an example of construal comprehension

Question 2
Construals vs programs: states and behaviours

Some relevant topics for revision:
- Broader view of computing (SBR)
- EM and modelling state
  – Turing "mind following rules"
  – Gooding: construals for science e.g. Faraday
  – Situation, ignorance and nonsense
- EM and the explanation of behaviour
  e.g. Ant Navigation, the lift adventure, Ficts

Question 3
Constructivism & Constructionism: making construals

Some relevant topics for revision:
- Latour constructivism
- Papert constructionism
- Construals as enabling a constructivist outlook
  – Ben Ari: computer as accessible ontological reality
  – Bret Victor's support for Papert constructionism
  – Online teaching together with active learning
- EM for constructionism, and for construction

Question 4
Software development from an EM perspective

Some relevant topics for revision:
- Realising sw development as a lived experience
- Dave West on hermeneutic and formalist approaches: in "Object Thinking"
- EM in its relation to topical issues, such as:
  – programming paradigms
  – database theory / formal vs informal
  – conceptual integrity
  cf. Date, Darwen, Ridley, Jackson, Harel, Brooks

Question 5
The ADM: overview and applications

Some relevant topics for revision:
- ADM characteristics
- ADM and the semantics of EDEN models
- LSD concepts & accounts of concurrent systems
- Machine- and human-oriented perspectives
- Analogy between EM systems development and the emergence of modern railways