

SEMESTER II, SUMMER 2000 EXAMINATION

The B.A. Degree Examination

Systems Approach (CT317)

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Time Allowed: 2 hours

Answer any three questions

1. Describe the different stages in Checkland's Soft Systems Methodology.
2. In his paper "Reengineering the University", Tsichritzis argues that "Universities are due for a radical restructuring. After centuries of evolutionary changes, they are faced with carving out new roles and methods to get there." Select what you believe is the most important relevant system for a modern university, and model this using the first four stages of Soft Systems Methodology.
3. Compare and contrast health-related case studies of SSM and System Dynamics. What criteria should be used in determining which methodology is most appropriate to a given problem?
4. For the following problem description, generate:
 - A causal loop diagram
 - A set of system dynamics equations

Student enrol in a course at the rate of 100/year. The course duration is 4 years. Statistically, it has been shown that, for a variety of reasons, not all students who enrol end up graduating. It is also important that the model record the number of graduates. State any assumptions made in formulating the model.

5. Generate a set of system equations from the following causal loop diagram. The system exhibits negative feedback, where the production rate rises if the oil level falls negative, and the production rate falls if the oil level rises above an arbitrary positive value.

