Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)

I SEMESTER M.TECH (ENGINEERING MANAGEMENT)
END SEMESTER EXAMINATIONS, NOV/DEC 2015

SUBJECT: COMPLEX BUSINESS DYNAMICS [HSS 521]

REVISED CREDIT SYSTEM

Time: 3 Hours   MAX. MARKS: 50

Instructions to Candidates:

❖ Answer **ANY FIVE FULL** questions.
❖ Explain with neat sketches wherever necessary.
❖ Missing data may be suitably assumed.

1A. Explain the concept of policy resistance with an example.   **(03)**

1B. **Case Study:**

ABX Manufacturers is a company manufacturing iron and steel rods for construction. The general manager, K. Giridhar Prasad, was unhappy with his management team. The managers were not able to fulfil the responsibilities given to them properly. Prasad hired a renowned HR consultant in the city, Sudheer Sharma to counsel and conduct development programs for the managers.

Sharma visited the firm and held one-to-one meetings with the managers. These meetings revealed something interesting- the actual reason for the poor performance of the managers was Prasad himself. The managers did not like Prasad's style of management. Prasad had been always keen on self-promotion in his meetings with superiors and subordinates. He lacked respect for the other people. He would point out even a small mistake committed by a manager and criticize him a lot in the presence of other managers. He imposed a high degree of control over his managers. He always pressurized managers to do whatever task he gave them, on priority. Moreover, he changed priorities frequently. Sometimes, Prasad assigned the same task to different managers. Managers believed that this was because Prasad did not have faith in their abilities.

However, they respected Prasad for his intellectual capabilities. But, Prasad always boasted of his own achievements and those of his management team. He sent wrong reports to the head office stating that

many projects were completed before they were actually completed. The head office, therefore, assigned more work to Prasad's office, overburdening the managers. The managers were frustrated and wanted to complain about Prasad's behaviour to the Vice President of the company. Some managers tried to cope with the problem by keeping aside the tasks assigned by Prasad intermittently, unless they were really urgent. Each manager had 30-50 tasks pending with him. Last minute rush and errors were therefore common in the organization.

When Sharma spoke to managers and observed the work practices in the firm, he found that the organization lacked proper planning and the management focused on solving problems, rather than preventing problems. Also, there was lack of coordination among the various organizational processes. When Sharma presented the results and findings to Prasad, Prasad was surprised to know that he was responsible for the demotivation of his managers. Prasad wondered how is it that, managers had such a huge number of pending projects. He went to one of the managers and examined the pending list. After seeing the projects on the list, he told Sharma that some of them were just ideas which had come to his mind, which he conveyed to his managers. He did not want managers to take them as projects. However, Prasad told Sharma that he wanted to change his behaviour and improve his leadership style so that the problems would not recur in the future.

Questions to be answered:

i) State and explain the learning disability that can be observed significantly in Prasad. **(02)**

ii) Explain any one of the 'laws of fifth discipline' which can be observed in the case. Justify. **(02)**

iii) Draw the causal loop diagram and stock and flow diagram with notations for the problem of piling up of pending projects w.r.t the case. **(03)**

2A. State the importance of model validation in SD modelling. Explain any TWO validation tests that can be used for the following: **(05)**
   i) Validating a model structure
   ii) Validating a model behaviour

2B. For the above example (in Q2B) derive the mathematical formulation for the behaviour that is observed in the system. **(03)**

2C. Explain a linear first order system with an example. **(02)**

3A. Differentiate between: **(03)**
   i) Participative Openness and Reflective Openness
   ii) Dialogue and Discussion

3B. Explain the archetype of holding a creative tension. **(03)**

3C. Explain localness. What are the challenges faced generally by a firm while practicing localness. **(04)**

4. A manufacturing company of electronics devices is expecting a drastic increase in sales in the tenth year from now. The current sales level is 500 products per month and is expecting an increase by 250 products in the tenth year. The manufacturing system is closely related to the number of employees and their productivity. You are supposed to take a strategic HR Planning decision for which you are planning to develop a SD model. Figure 1 shown below represents the Causal Loop Diagram for the Human Resource Planning (HRP) system.
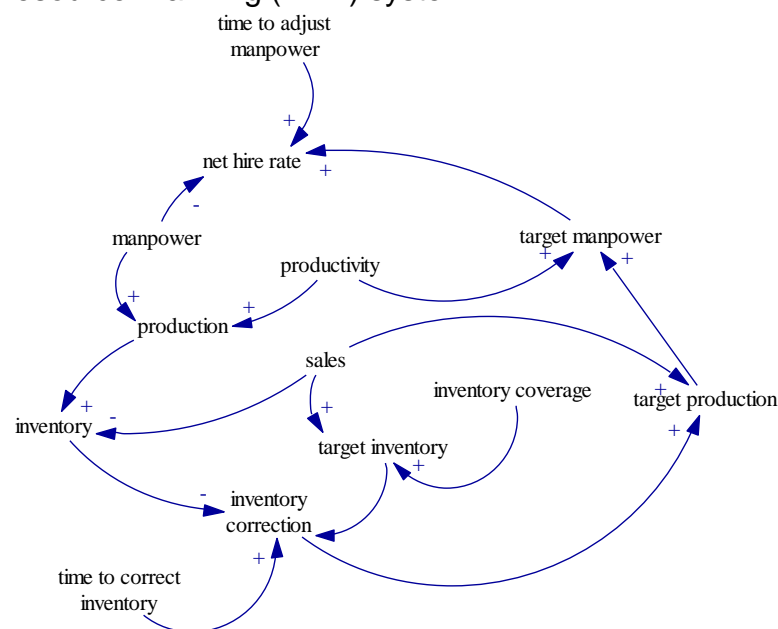

Figure 1: Causal Diagram for HRP model

You are required to:
   i) Explain the basic principle behind the stock and flow diagram. **(1)**
   ii) Draw a stock and flow diagram and explain its working principle. **(2)**
   iii) Explain how the results obtained can be used in taking the desired decisions. (Make suitable assumptions) **(2)**
   iv) Suggest the future scope for the same model with the possible modifications (adding the new variables) in the model. Justify. **(2)**
   v) Explain the various stages of an SD modelling using the above example. **(3)**

5A. Explain the structure of the system that generates the following behaviour: **(04)**
- **i)** Goal seeking
- **ii)** S-shaped growth with overshoot and oscillation

5B. Explain the following with respect to causal loop diagram: **(06)**
- **i)** Choosing the right level of aggregation.
- **ii)** Make the goals of negative loops explicit.
- **iii)** Differences between causal loop diagram and stock and flow diagram.

6. Briefly explain the five disciplines of a learning organization with clearly stating the challenges and significances of each if it is adopted by an organization. **(10)**