



Försättsblad Prov Original

Kurskod	Provkod	Tentamensdatum
I G 0 1 8 G	T 1 0 1	2 0 1 9 - 0 4 - 2 5
Kursnamn	Industriell organisation och ekonomi GR (C), Logistik	
Provnamn	Skriftlig salstentamen	
Ort	Sundsvall	
Termin		
Ämne		

Exam in Logistics IG018G, 3hp

Date: 2019-04-25, Time: 3 hours

Every exercise is 5 points in part A and 10 points in part B . So in total 40p divided equally on Part A and B. The Grading is as follows.

Fx \geq 16p; A,B \geq 6p

E \geq 18p; A,B \geq 8p

D \geq 23p; A,B \geq 10p

C \geq 27p; A,B \geq 12p

B \geq 31p; A,B \geq 14p

A \geq 35p

Example: If you have $20p+7p=27p$ this is an Fx but if you have $14p+13p=27p$ this is a C etc. If you have Fx you can decide together with the examiner to make a small test (orally or written) for an E or to write the whole exam again giving you the opportunity to get any grade.

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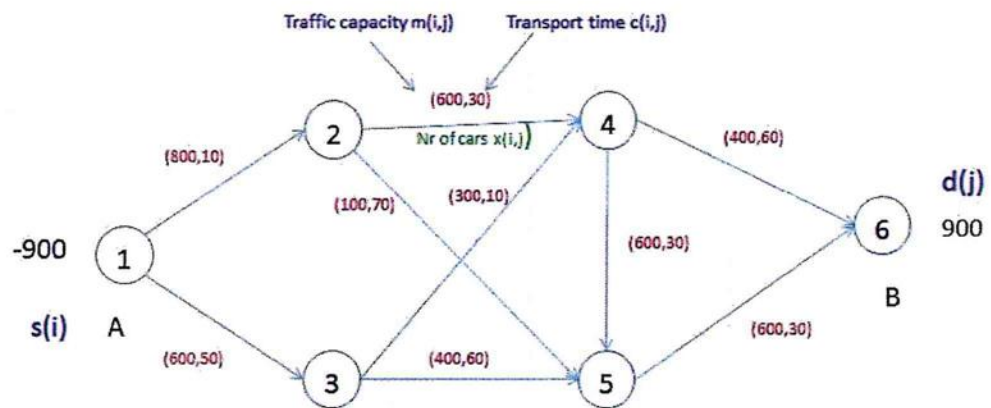
You are only allowed to use pen and paper and answers must be given in English or Swedish.

Part A:

1. Describe or depict the value chain model introduced by Porter (1985)
2. According to Rother & Shook (1999). Why is Value Stream Mapping an essential tool? State at least five points.
3. Risk and Uncertainty usually has its origin from many sources in logistics depending of the actual supply chain. However, demand uncertainty usually exist and give escalating problems upstream most supply chains. What is this effect called, how do it relate to another more general concept? Describe this effect by a small example.
4. In intermodal logistics the decision problem today usually involves several conflicting criteria. Give an example that exemplifies this problem. What is the meaning of intermodal logistics?

Part B:

1. Formulate the depicted network model as a general linear programming (LP) model using mathematics with correct defined parameters, variables, sets and that the describes in a mathematical way the connection to the data.



2. We produce two types of skis. This production require two processes: Glueing and Cutting. The profit is 50 SEK/ski for type 1 and 60 SEK /ski for type 2. It takes 2 respective 3 minutes to cut a ski of each type and 3 and 2 minutes to glue a ski of each type. Both processes have for every production cycle a production time of 20 minutes.
 - a. Write a figure and compute the graphical solution of this LP problem
 - b. Set up the LP model and check that the graphical solution is feasible for this model.

Good Luck/Leif