

## **TU-C2020 Operation Management 29.11.2014**

You were not allowed to take the exam paper with you. Here are the questions from memory. There will be mistakes in these.

### **I (5 points) Explain the terms**

1. Operation management
2. MRP (Material requirements planning)
3. Bullwhip effect
4. Job enrichment
5. LIFO Sequencing

### **II (7 points) Discuss the subjects briefly**

1. Briefly discuss why variability in processes is usually bad. Explain the difference between "Common Causes" and "Special Causes". (2 points)
2. Briefly discuss key operation strategy decisions. (2 points)
3. Briefly discuss why service and traditional production manufacturing operation management is different. (3 points)

### **III (6 points) Essay**

Essay: Facility layout. How layout affects operation? Explain different layout types their pros and cons and process types they are suitable for.

### **IV (12 points) Casestudy**

A case study about production system design. The product was a steel mug with a half page description about structure and manufacturer.

a)

Explain the order qualifying and order winning criteria for the product.

b)

Draw a BOM diagram for the product

c)

Explain what process type would you choose and why.

d)

Explain what OPP would you select for the system and why.

e)

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f)

Explore mass customization possibilities and benefits to you and the customer.

g)

Two main materials are steel and wood. Explain how would you select a supplier and what sourcing model would you use (single, dual or multi).