



Aalto University

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Quality Management and Metrology (MEC-E1090)

Examination on Wednesday the 16th of November 9...12 o'clock, K216

1. What are the most important guidelines for the manufacturing industry companies in **ISO 9001** –quality standard
2. Contents and evaluation criteria of **Malcolm Baldrige National Quality Award**
3. Write out the Lean Six Sigma acronym **DMAIC** and explain how you can utilize the procedure for improving your production processes
4. What is $\bar{x}R$ –**control card** and how do you utilize the card in quality system
5. **Coordinate Measuring Machine**; different machine structures, probes, control software and industrial applications
6. Answer very briefly:
 - a) Measurement uncertainty
 - b) Gauge blocks
 - c) Micrometer
 - d) Laserinterferometer
 - e) Calibration temperature
 - f) MIKES

(Grades: 0...6 points/question, accepted examination 40% of the maximum points eq. 14 points)

Rewarding and joyful winter!

Kalevi Aaltonen