TTE-5406 Formal Methods in Factory Automation Exam 14.02.2011

Tentti kopioitu käsin. Jokainen tehtävä 10 % pisteistä.

- Q1. The difference between testing and verification.
- Q2. Draw two different standard ways of representing a machine or a robot with Petri Nets. Explain what are the advantages of one versus the other.
- Q3. What is a Mealy machine?
- Q4. Melkein sama kuin Problems 1) tehtävä 28.1.2009 tentissä. PN vähän erilainen.
- Q5. How is LTL verification performed?
- Q6. Is parametric analysis (having as parameter the initial marking) possible for enumeration techniques in PNs? Explain your answer.
- Q7. What distribution would you use to characterize the time between two successive pallets visiting a machine? Explain your answer.
- Q8. Can all deadlock handling methods traditionally used in computer science be used for automated manufacturing systems? Why / Why not?
- Q9. Are sleep sets suitable for constructing a reduced reachability graph in case you want to check marking invariant properties? (YES/NO) Why?
- Q10. Explain the ignoring problem.