



**State exam questions  
Mechanical Engineering MSc  
Production Engineering specialization**

**Simulation of Manufacturing Systems and Processes;  
and Production Automation**

1. Please describe the concept of indicator system, please describe OEE indicator!
2. Please describe which cellular manufacturing layouts you know!
3. Please describe the concept of balancing (assembly line balancing)!
4. Please describe the concept and types of kanban!
5. Please describe the concept of cycle time!
6. Describe the structure of the pneumatic systems in the production automation field!
7. Describe the types and the application area of sensors which are used in the production automation field!
8. The integration of industrial robots in the complex manufacturing process. The types and constructions of industrial robots.
9. Rapid prototyping processes. Analysis of Objet Polyjet, Rapid Manufacturing and Hybrid technologies.
10. General construction of CNC machines. Function of ball circulating screw. The absorption of the tools in case of CNC machines.