Industrial Robot Programming & Simulations
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Final Exam questions 2020

1. Basic definitions, regarding Configurations of Industrial Robot Systems (work space, loading, ...)
2. Characterize and define the basic coordinate systems used in industrial robotics. Mathematical descriptions of WS calculations.
3. Define the degrees of freedom, degrees of torque, define the WS and Death zones, mathematical descriptions.
4. PTP, CPP – path planning methods. Featuring the methods, regarding robot programming (control parameters, adjustable parameters)
5. Kinematic description of the robot manipulators: HTM, DH, R and Jacobi – matrices and its using.
6. Robot control; block diagram of robot control, process of robot control, types of control (hybrid, own controller), embedded control programs.
7. Informatics bases of robot programming: The software levels in programming, set of instructions, syntax, semantics, pragmatics, variables, parameters.
8. ON-Line programming: Features of different types of on-line programming
9. OFF-Line programming: Features of different types of on-line programming
10. The START-UP process of robot controller
11. Algorithms, tasks, parallel programming, operational systems
12. Program developing process, addressing and handling of variables, the FRAME description.
13. STACK operations and , operation of the interpreter, reverse polish-code operation.
14. Sub-programs, functions, procedures, macros, recursions – features and operations.