Mohamed Cherif Messaadia University, Souk Ahras **Faculty of Science and Technology** Department of Electrical Engineering June 09. 2025 Subject: PLC Duration: 01:30H Level: 3rd year Speciality: Control **Retake Exam** Correction of the exercise 1: (04.0 pts) **1.** The cycle time of a PLC varies depending on: (1.0 pts) **Program Size** -Calculation Complexity Number of Inputs/Outputs -CPU Power -**Process Requirements** -2. PLC programs are processed in a specific cycle, typically as follows: (1.5 pts) -Input scan **Program processing Output Update** Input scan **Program Processing** -Output Update -**External Communications** -Self-Diagnosis -Self-Diagnosis External Communications

Figure 1. Operating Principle of a PLC

- 3. The main components that make up an automated system are: control part (CP), operative part (OP). (0.5 pts)
- 4. Sensors: distance sensor, pressure sensor.
 Pre-actuators: speed variator, relay.
 Actuators: DC motor, cylinder, displayer. (1.0 pts)

Correction of the exercise 2: (04.0 pts)



Correction of the exercise 3: (6.0 pts)



Correction of the exercise 4: (6.0 pts)

