

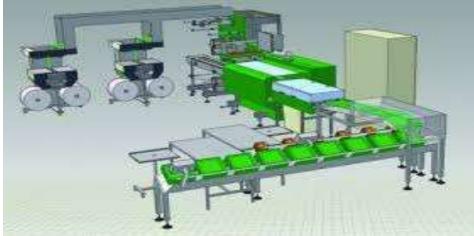
# ELECTRICAL MACHINES IN ROBOTICS AND AUTOMATION



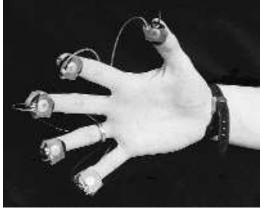
#### **UNIT IV - INDUSTRIAL AUTOMATION**

PLC – ladder and FBD programming – analog inputs – HMI – pneumatic and hydraulic drives – AC drives and servo drives

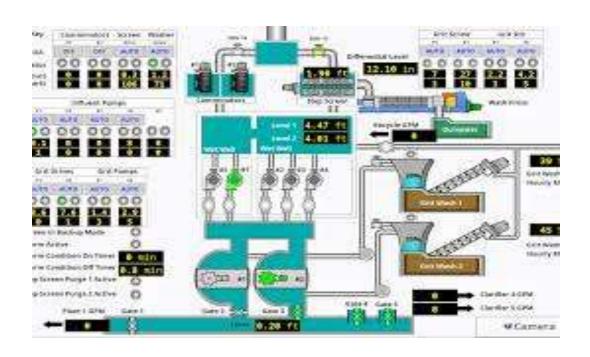


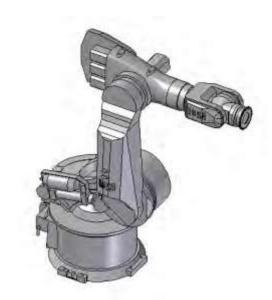






#### **INDUSTRIAL AUTOMATION**









### What is INDUSTRIAL AUTOMATION





### What is A Industrial Automation



Industrial automation is the control of machinery and processes used in various industries by autonomous systems through the use of technologies like robotics and computer software.

Industries implement automation to increase productivity and reduce costs related to employees, their benefits and other associated expenses, while increasing precision and flexibility.





## Types of Industrial Automation



#### **Types of Industrial Automation**

- ➤ Fixed (Hard) Automation.
- ➤ Programmable Automation.
- >Flexible (Soft) Automation.
- ➤ Integrated Automation (TIA)

