

Revision Sheets for Final Exam – ICT**Grade 8**

A **ROBOT**: is a machine which is programmed to move and perform certain tasks automatically.

ROBOTICS : the branch of technology that deals with the design, construction, operation, and application of robots.

Types of ROBOT according how it work :

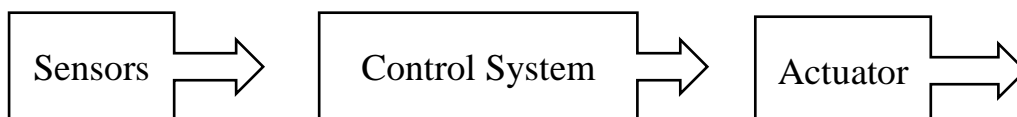
- 1- Automated Robot : Robot can do the work of a human by themselves.
- 2- Autonomous Robot : Robot can make decisions by themselves .

Types of ROBOT according what it work :

- 1- Medical Robot
- 2- Cleaning Robot
- 3- Military Robot
- 4- Industrial Robot
- 5- Entertainment Robot
- 6- Space exploration Robot

A Robot has three main parts :

- 1- the Sensors for INPUT.
- 2- the Control System (which is the brain).
- 3- An Actuator or OUTPUT .



Input : is the instruction that are given to the Robot to perform a specific task .

Sensors are used to tell a Robot about its surroundings .

Types of Sensors :


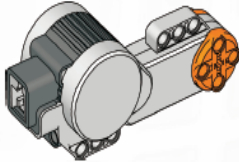

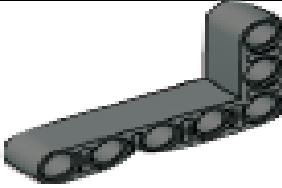



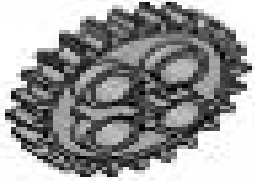
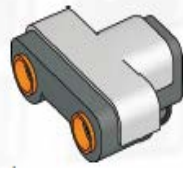



- 1- Light sensors .
- 2- Sound sensors.
- 3- Ultrasonic sensors.
- 4- Touch sensors .
- 5- Temperature sensors.
- 6- Humidity sensors .

Control system (brain) :Is a device that manages or controls the behavior of other systems . It acts as the ‘ brain ‘ in any robotics system . Control system come in many shapes and sizes .These do all the processing for the robot .

Output is the result you get based on your input and processing .

An **actuator** is the part of the Robot that perform a physical action

Parts of Robot :

			
NXT	Motor	Beam, 7-module, dark grey	Angular beam, 3X5-module, dark grey
			
Axle, 6-module, black	Connector	Cross block	Gear, 40-tooth, grey
			
Ultrasonic Sensor	Touch Sensor	Light Sensor	Sound Sensor