**Introduction to Robotics – Assignment 2**

Question 1: What is the definition of a robot? A robot is a machine—especially one programmable by a computer—capable of carrying out a complex series of actions automatically. A robot can be guided by an external control device, or the control may be embedded within. Robots may be constructed to evoke human form, but most robots are task-performing machines, designed with an emphasis on stark functionality, rather than expressive aesthetics.

Question 2: What are the three main components of a robot?

1. Sensors are what allow a robot to gather information about its environment
2. The effectors are the parts of the robot that actually do the work
3. Control Systems (the "brains") A robot's "control system" is that part of the robot that determines the robot's behavior

Question 3: What are the main types of robots based on their application?

1. Industrial Robots
2. Domestic Robots
3. Surgical Robots
4. Robonaut is a NASA robot. Engineers designed Robonaut to be humanoid, which means it is built to look like a person. This makes it easier for Robonaut to do the same jobs as a person.
5. Commercial Entertainment Robots
6. Army Robots
7. Service Robots

Question 4: Give 3 examples of sensors that helps a robot understand its environment.

1. Light sensors — to detect light.
2. Sound sensors — to detect sound.
3. Temperature sensors — to detect fluctuations in temperature.