Assignment 4

1. The figure below describes the pressure control system. The system includes a sensor, a controller, and an actuator.

   a. Identify the type of sensor used in the system. (3 marks)

   b. Describe the function of the controller. (2 marks)

   c. Explain how the actuator affects the system. (2 marks)

2. A temperature control system is shown in the diagram below. The system includes a sensor, a controller, and an actuator. The sensor measures the temperature, and the actuator adjusts the temperature to maintain a setpoint.

   a. Identify the type of sensor used in the system. (3 marks)

   b. Describe the function of the controller. (2 marks)

   c. Explain how the actuator affects the system. (2 marks)

3. The figure below shows a typical block diagram of a feedback control system. Identify the different components of the system. (3 marks)

   a. Sensor

   b. Controller

   c. Actuator

   d. Feedback loop

4. A process control system is shown in the diagram below. The system includes a sensor, a controller, and an actuator.

   a. Identify the type of sensor used in the system. (3 marks)

   b. Describe the function of the controller. (2 marks)

   c. Explain how the actuator affects the system. (2 marks)

5. The figure below shows a typical block diagram of a feedback control system. Identify the different components of the system. (3 marks)

   a. Sensor

   b. Controller

   c. Actuator

   d. Feedback loop

6. A temperature control system is shown in the diagram below. The system includes a sensor, a controller, and an actuator. The sensor measures the temperature, and the actuator adjusts the temperature to maintain a setpoint.

   a. Identify the type of sensor used in the system. (3 marks)

   b. Describe the function of the controller. (2 marks)

   c. Explain how the actuator affects the system. (2 marks)

7. The figure below shows a typical block diagram of a feedback control system. Identify the different components of the system. (3 marks)

   a. Sensor

   b. Controller

   c. Actuator

   d. Feedback loop