

Name	Score

Question 1

a) Name 3 types of sensors commonly used in automated systems (1 mark)

1.

2.

3.

b) For one of your sensors describe the physical quantity it detects and give an example application (4 marks)

c) Describe the difference between an analogue and digital sensor (2 marks)

Question 2

a) What is an actuator? Explain its role in an automated system. (2 marks)

b) Describe the difference between linear and rotational actuators (2 marks)

c) Describe one type of actuator and explain a situation in which it could be used (4 marks)

d) A conveyor belt system needs to stop when an object is detected.
Name a suitable sensor and actuator combination. (1 mark)

e) Describe how a controller would interface with the components you mentioned in part c, and how the system would function. (6 marks)

Question 3

a) What is a microcontroller, and how does it differ from a standard computer? (2 marks)

b) What is a microprocessor? (2 mark)
