

## **Tutorial 2 CS5100**

### **Question 1:**

Define in your own words the following terms: agent, environment, sensor, actuator, percept, agent function, agent program.

### **Question 2:**

Describe three different task environments in which the performance measure is easy to specify completely and correctly, and three in which it is not.

### **Question 3:**

For each of the following task environment properties, rank the example task environments from most to least according to how well the environment satisfies the property. Lay out any assumptions you make to reach your conclusions.

- a. Fully Observable: driving; document classification; tutoring a high-school student in calculus; skin cancer diagnosis from images
- b. Continuous: driving; spoken conversation; written conversation; climate engineering by stratospheric aerosol injection.

### **Question 4:**

Define in your own words the following terms: rationality, autonomy, reflex agent, model-based agent, goal-based agent, utility-based agent, learning agent.

### **Question 5:**

Are reflex actions (such as flinching from a hot stove) rational? Are they intelligent?