Artificial Intelligence
ECE 412C

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(at Shoubra)

Sheet 1

1. (1.1) Define in your own words:
   (a) intelligence,
   (b) artificial intelligence,
   (c) agent,
   (d) rationality, and
   (e) logical reasoning.
2. (1.3) Are reflex actions (such as flinching from a hot stove) rational? Are they intelligent?
3. (1.6) How could introspection—reporting on one's inner thoughts—be inaccurate? Could I be wrong about what I'm thinking? Discuss.
4. (1.7) To what extent are the following computer systems instances of artificial intelligence:
   (a) Supermarket bar code scanners.
   (b) Web search engines.
   (c) Voice-activated telephone menus.
   (d) Internet routing algorithms that respond dynamically to the state of the network.
5. (1.9) Why would evolution tend to result in systems that act rationally? What goals are such systems designed to achieve?
6. (1.10) Is AI a science, or is it engineering? Or neither or both? Explain.
7. (1.11) "Surely computers cannot be intelligent—they can do only what their programmers tell them." Is the latter statement true, and does it imply the former?
8. (1.12) "Surely animals cannot be intelligent—they can do only what their genes tell them." Is the latter statement true, and does it imply the former?