

CM 2602 – Artificial Intelligence
Tutorial 01

1. To what extent are the following computer systems instances of artificial intelligence:
 - Supermarket bar code scanners.
 - Web search engines.
 - Voice-activated telephone menus.
 - Internet routing algorithms that respond dynamically to the state of the network.
2. Is AI a science, or is it engineering? Or neither or both? Explain.
3. Write the PEAS description for the following agents?
 - i. Taxi Driver
 - ii. Part-picking robot
 - iii. Interactive Mathematics Tutor
 - iv. Bidding Agent
 - v. Web Search Agent
 - vi. Medical Diagnostic Agent
 - vii. Game Agent
4. Write down the properties of the following task environments. Indicate whether the environment is observable, no of agents, deterministic, episodic, static or discrete.
 - i. Crossword puzzle
 - ii. Chess
 - iii. Chess with a clock
 - iv. Taxi driving
 - v. Medical diagnosis
 - vi. Part-picking robot
 - vii. Interactive English tutor
5. Can there be more than one agent program that implements a given agent function?
6. Are there agent functions that cannot be implemented by any agent program?
7. Given a fixed machine architecture, does each agent program implement exactly one agent function?
8. Given an architecture with n bits of storage, how many different possible agent programs are there?