REVIEW EXERCISE 01

Question 01. Consider the following activity. A little boy is playing hide-and-seek with his friends in the playground. He is the seeker that attempts to locate all hiders, and he will yell "Found" every time he catches a hider.

Specify the PEAS description for the task environment of the above activity.

Performance measure: locate all the hider successfully

Environment: the playground, the hiders, all the objects in playground (trees, flowers,....)

Actuators: leg (to move), hand (to catch hiders), mouth (to yell "Found")

Sensors: eyes (to see everything around), ear (to hear the sound)

Question 02. Identify the following task environment properties of the above task. Do not forget to give your explanation for every dimension.

Fully observable vs. Partially observable.

Sin because all players hide only in the area of playground so he can use percepts

because we need at least a hider to play the game

Deterministic vs. Stochastic.

the seeker only need to find the hiders and yell "FOUND"

Episodic vs. Sequential.

because find all the hiders independent but the goal is all hiders

Question 03. Consider the following activity. A little boy is playing blind man's bluff with his friends in the playground. He is the catcher that attempts to touch any hider to switch their roles, while the hiders shout and laugh to distract the catcher.

to locate correctly where a friend hides then touch him/her to switch roles

Specify the PEAS description for the task environment of the above activity.

Performance measure:

Environment: friends as hiders, playground with many objects (trees, flowers, toys,...)

Actuators: legs (to move), hands (to touch hiders)

Sensors: ears (to hear and locate by heart), hand (using for touch things which needs to feel the area)

Question 04. Identify the following task environment properties of the above task. Do not forget to give your explanation for every dimension.

Fully observable vs. Partially observable.

Single-agent vs. Multi-agents.

Deterministic vs. Stochastic.

Episodic vs. Sequential.