ROS 2, Flatland and Reinforcement Learning Quiz

ROS 2

1.	If you make modifications in one of your packages, inside which folder do you need to run the command build the changes?
	Mark only one oval.
	Workspace folder
	Root folder
	ROS 2 installation folder
	The modified package folder
2.	Imagine you are developing a controller for a robot and need to know its position but only when a collision with a wall is detected. The most efficient way for the robot to share this information is to use a:
	Mark only one oval.
	ROS Service
	ROS Setup file
	ROS Node
	ROS Topic

3.	What should be used to communicate with a Node that only has the task of controlling the speed of a motor in a robot?
	Mark only one oval.
	ROS Topic
	ROS Setup file
	ROS Node
	ROS Service
4.	Which statement is false about ROS Nodes:
	Mark only one oval.
	A Node can be a client for a Service and a server for other simultaniously.
	Nodes can only comunicate with other Nodes that were launched by the same launch file.
	Nodes are the vertices of the ROS graph.
	A single robot can be controlled by many Nodes.
	Flatland
5.	The image that is used to represent the walls of the map needs to be sourced in which file?
	Mark only one oval.
	Layer file
	RViz file
	World file
	Model file

6.	In the following layer setup: Robot 1 -> Layer 1, Layer 3 Robot 2 -> Layer 2, Layer 3 Robot 3 -> Layer 2
	Which robots collide with each other?
	Mark only one oval.
	Robot 1 collides with 2, Robot 2 collides with 3. All the robots collide.
	There are no collisions.
	Robot 3 collides with 2, Robot 3 collides with 1.
7.	In the following layer setup: Robot 1 -> Layer 1, Layer 3 Robot 2 -> Layer 2, Layer 3 Robot 3 -> Layer 2
	Laser -> Layer 2, Layer 3
	The Laser detects:
	Mark only one oval.
	All the Robots.
	None of the Robots.
	Only Robot 2.
	Robots 1 and 2.
0	
8.	Which of these Flatland plugins subscribes to a topic?
	Mark only one oval.
	Diff Drive
	Bumper
	Laser
	GPS

Reinforcement Learning

9.	The possible actions for any given state are defined by the:
	Mark only one oval.
	Environment
	Agent
	Observation space
	Reward
10.	When a final state is reached, this means that:
	Mark only one oval.
	The environment needs to be reset to an initial state.
	The agent failed to complete the task.
	The next action chosen by the agent depens on that state.
	The agent was succesful in completing the task.
11.	Considering the concepts of step and episode in reinforcement learning, which of these statements is false?
	Mark only one oval.
	Each episode needs to have the same number of steps.
	An episode is a set of steps.
	In each step, an action is performed and a reward is atributed.
	Steps can have different time durations.

12.	Each algorithm defines its own policy to decide which action to take based on the state. The entity that makes this decision is also known as the:
	Mark only one oval.
	Agent
	Neural Network
	State space
	Environment

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