

Lab Sheet 1

Q1)

Using Matlab, load commercially available robot models like the Universal Robots™ UR10 cobot, Boston Dynamics™ Atlas humanoid, and KINOVA™ Gen 3 manipulator. Explore how to generate joint configurations and interact with the robot models.

[three separate programs , output screen shots required]

Q2) What is Gimbal lock . Explain in 10 sentences.

Experiment with the triple angle in Matlab robotics toolbox. Explore roll pitch and yaw motions.

[Command, screenshot of default model and the screenshot of gimbal lock model.]