Benha University

Faculty of engineering (Shoubra)  **Model Answer**

ECE 447: Robotics Engineering Quiz No. 2 (Time: 45 min)

**Name**: **Department**: ECE / CSE

Please note, this is a one of many possible solutions according to the assignment of the frames.

For the shown UR10 robotic manipulator, **assign the coordinate frames** on the right projection. **Fill the DH table** below.





|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Link | *a* | *α* | *d* | *θ* |
| 1 | 0 | +90 | $$d\_{1}$$ | $$θ\_{1}^{\*}$$ |
| 2 | $$a\_{1}$$ | 0 | 0 | $$θ\_{2}^{\*}$$ |
| 3 | $$a\_{2}$$ | 0 | 0 | $$θ\_{3}^{\*}$$ |
| 4 | $$0$$ | -90 | $$d\_{2}$$ | $$θ\_{4}^{\*}$$ |
| 5 | 0 | +90 | $$d\_{4}$$ | $$θ\_{5}^{\*}$$ |
| 6 | 0 | 0 | $$d\_{5}$$ | $$θ\_{6}^{\*}$$ |
|  |  |  |  |  |

 DH Table

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DH terms:

