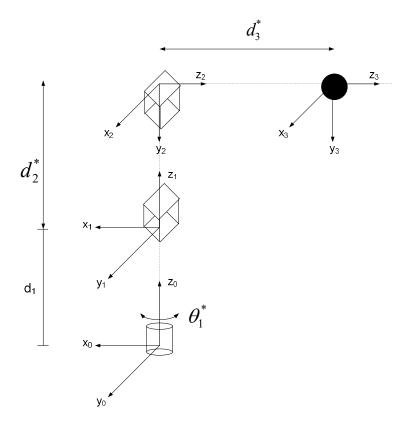
MCE4101 Sept2020

MCE4101 Introduction to Robotics Quiz2 (5%) SET14

Name		ID	
Date: 15 Sept 2020 ((9.15-10.00)		

Note:

- 1. OPEN BOOK.
- 2. Matlab is allowed.
- 3. Answer to the nearest 2 decimal place.
- 4. 40 Marks equivalent to 5%.
- 1. (40 Marks). The 3 links RPP robot is shown.
 - a) (5 Marks) Obtain DH table and the transformation matrix <u>equation</u> T^0_3 . Where d_1 is link offset. Given $d_1 = 2.5$.
 - b) (15 Marks) Determine with analytic method for possible solution for end point location Pend = [1.13 1.95 5]. Show your working steps.
 - c) (10 Marks) Determine with ikine robotic function for possible solution for end point location Pend = [1.13 1.95 5]. Given IG = [-pi/10 1 1]. Show your MATLAB code and the answer.
 - d) (10 Marks) Check your answer b) and c) with fkine robotic function. Show your MATLAB code and the answer.



MCE4101 Sept2020