MCE4101 Introduction to Robotics
Quiz2 (5%) SE15

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%.

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1. (40 Marks). The 3 links RPP robot is shown.
   a) (5 Marks) Obtain DH table and the transformation matrix **equation** T^0_3. Where d_1 is link offset. Given d1 = 2.5.
   b) (15 Marks) Determine with analytic method for possible solution for end point location Pend = [1.13 1.95 3.75]. Show your working steps.
   c) (10 Marks) Determine with ikine robotic function for possible solution for end point location Pend = [1.13 1.95 3.75]. 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.