**EE5110/5062/6110:Autonomous Systems**

**Assignment 5 (Motion planning )**

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| 1. Write your Name, Matriculation Number, Module Code (EE5110/5062/6110) on the cover page,  2. List your answers in order; Name your report as A1234567.pdf (where A1234567 is your matric number)  3. Submit your report to the website by 16 Nov. 2021. |

Based on the lecture notes, and any additional reading materials of yours, answer the following questions:

5. Literature review regarding trajectory generation in autonomous system. In the literature review, please present existing several methods in trajectory generation including typical references (it is better to limit body texts under 1200 words).

6.A single-link manipulator with a revolt joint stopping at 𝜃 = 15 degrees. It is desired to move the joint in a smooth manner to 𝜃 = 75 degrees in 3 seconds. Find the coefficients of a five order polynomial

that accomplishes this motion and brings the manipulator to rest at the goal. The following boundary conditions are given

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Please answer the following questions:

1. give all six coefficients.
2. plot position, speed and acceleration profiles.